

SECOND
ANNUAL CALENDAR
OF THE
UNIVERSITY OF ALBERTA
1909-1910

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1909/10

**Second : : : : :
Annual Calendar
of the University
of Alberta : : : : :**

Session of 1909-1910

Governing Body of the University of Alberta.

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HON. MR. JUSTICE STUART, B.A., LL.B.,
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HENRY MARSHALL TORY, M.A., D.Sc., LL.D.,
President of the University.

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J. McCAIG, M.A., LL.B.	R. S. JENKINS, M.A.
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Professor of English Language and Literature.

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Professor of Philosophy

ADOLPH LEHMAN, B.S.A. (Guelph), Ph.D. (Leipsic),
Professor of Chemistry

HON. MR. JUSTICE STUART, M.A., LL.B. (Toronto),
Special Lecturer in Constitutional History

Librarian

EUGENIE ARCHIBALD, B.A.

General Announcement

The second session of the University of Alberta will begin on September 28th 1909. Courses are offered leading to the Degrees B.A. and B.Sc. in Arts, and B.Sc. in Applied Science. For the session 1909-1910 courses will be confined to the First, Second and Third Years in Arts, and the First and Second Years in Applied Science.

General Information.

The University of Alberta was created by an Act of the Legislature of the Province passed at the First Session after Provincial Autonomy had been granted; that is, the Act created the machinery by which the University could be brought into existence. By the Act the University, which consists of the Chancellor, Vice-Chancellor, the Senate and the Convocation, was empowered to undertake the organization and development of the teaching faculties, to affiliate colleges, and generally to undertake all the work relating to an institution of higher learning. An amendment to the Act, passed during the Session of the Legislature in 1907, authorized the Lieutenant-Governor-in-Council as a preliminary step to the organization of the University, to appoint the first President, to whom was to be given the responsibility, in conjunction with the Senate, of organizing and developing the University scheme. Acting upon this authority the Government selected the first President, who entered upon his duties on January 1st 1908.

Under the Act, all resident graduates of British and Canadian Universities became members of the Convocation of the University of Alberta by registering before a fixed date. Three hundred and sixty-four graduates, representing all the Canadian and many of the English Universities, registered, so that a large and representative body constituted the first Convocation.

The Act provided that the Senate should be the governing body, both in relation to education and business management.

The Senate consists of fifteen members, five of whom are elected by ballot by the members of the Convocation from among themselves, the remaining ten being appointed by the Government. The Chancellor is also elected by ballot by the University Convocation.

The voting for the first election to the Senate closed on March 18th 1908, and immediately afterwards the ten members, whom the Act required the Government to appoint, were appointed.

The first meeting of the Senate was held on Monday, March 30th 1908. At this meeting it was decided to undertake immediately the organization of the First Faculty to be known as the

Faculty of Arts and Sciences,

and to open the University of Alberta for Classes in this Faculty in September, 1908.

At the second meeting of the Senate held in Calgary on July 6th 1908, four professors, constituting with the President the First Faculty of the University, were appointed.

The First Session of the University opened on September 23rd 1908. The total registration for the Session was forty-five, four of whom were students taking graduate courses in the Department of Physics.

The University site is in the City of Strathcona immediately across the Saskatchewan River from Edmonton, and just opposite the proposed Legislative Buildings. It consists of two hundred and fifty-eight acres of land. The elevation above the river-valley is about two hundred feet, while the frontage on the river is twenty one hundred feet. In connection with its surroundings, it constitutes one of the most beautiful sites in Canada. It is a beautiful wooded park which will lend itself splendidly to an architectural scheme suitable for University purposes.

The University Classes are being conducted in the new and commodious Collegiate Institute of the City of Strathcona. In the meantime plans are being pushed for the completion of the first building on the University grounds.

Under the University Act, power is given the Senate to bring into the University Scheme affiliated Colleges. Provision for so doing will be made as soon as the necessity arises.

Courses Leading to Degrees.

The Undergraduate Courses leading to degrees extend over four sessions of two terms each. In the Faculty of Arts and Sciences Courses are offered leading to the Degrees of B.A. and B.Sc. in Arts and the Degree of B.Sc. in Applied Science. The Courses of Study so far as prescribed are shown on pages 17 to 40.

The Session.

The University Session is divided into two terms. The first term begins September 28th and closes February 3rd; the second term begins February 4th and closes June 1st. The Christmas holidays will extend from Wednesday, December 22nd to Tuesday, January 4th inclusive. The Easter holidays will extend from Thursday, March 24th to Monday, March 28th inclusive. The work of each term is so arranged as to be complete in itself. A student compelled to be absent during the second term of any year may join the classes in the second term of any subsequent year.

The Matriculation Examinations.

Two Matriculation Examinations are held during the year, one in June and one in September. The Examination in June for 1909 begins June 29th, and is held at all the High School centres throughout the Province of Alberta. Local Examinations may be held elsewhere, either within or without the Province, if application for the same be made before June

1st. The September Examination is held at the University only, and for the present year begins September 21st.

All enquiries concerning these Examinations should be addressed to the President of the University, University of Alberta, Strathcona, Alberta.

Students.

The Courses of Study in the University leading to degrees in Arts are open to men and women on equal footing.

Classification of Students.

Except under special circumstances no student under sixteen years of age will be admitted to the first year, or under seventeen to the second year.

Students are classified as Undergraduates, Conditioned Students and Partial Students.

Undergraduates are Matriculated Students who are pursuing a full Undergraduate Course of Study leading to a degree. In order to become Undergraduates, Candidates must have passed the full Matriculation Examination of the University or some other Examination accepted in lieu thereof. (See page 14.)

Conditioned Students are those who, not having completed their Matriculation Examination are, by permission of the Faculty, pursuing a full Undergraduate Course of Study leading to a degree, and are entitled to obtain Undergraduate standing on completing their Matriculation. Candidates who fail in a small part of their Examinations or who present Certificates of having passed Standards VII and VIII of the Province of Alberta, or an equivalent, but have not taken all the options required for Matriculation, may enter as Conditioned Students.

For students who are deficient in the language subjects and are admitted as Conditioned Students, special preparatory classes will be provided.

Partial Students are those who, not belonging to one of the above classes of students, are pursuing the study of particular subjects. Such students may, subject to the approval of the Faculty, attend classes without previous examination.

Second Year Entrance.

Students who have passed Standard VIII of the School Course of the Province of Alberta or the corresponding examination of any other Province of Canada may enter the Second Year and so complete the course for the B.A. Degree in three years; provided, however, that the courses from which they receive exemption on account of such Certificate together with the courses passed after entering the University shall be the full number of courses required for the degree and shall include the compulsory subjects.

Admission Ad Eundem Statum.

Any student of another University wishing to be admitted to this University with equivalent standing is requested to send with his application :

1st. A calendar of the University in which he has studied ;

2nd. A complete statement of the Course of Study he has followed ;

3rd. A certificate of standing and conduct from the University in which he has studied.

Matriculation Requirements

1. Every candidate for the Matriculation Examination is required to fill up an Application Form and return the same to the President of the University two weeks before the Examination. Blank forms may be had on application.

2. The subjects for examination are divided into two groups: Preliminary and Final.

3. The Preliminary subjects may be taken at any Matriculation Examination, and the Final at any subsequent examination. Special provision may be made from time to time for the holding of the Preliminary Examination.

4. The subjects for examination are as follows:

A. For candidates who desire to proceed to the B.A. Degree:

I.—PRELIMINARY SUBJECTS

English Composition and Dictation,
English Grammar and Rhetoric,
History,
Arithmetic.

II.—FINAL SUBJECTS

English Literature,
Algebra, Part I,
Geometry, Part I,
Latin or Greek.

Greek or Latin (the one not already chosen), or
French or German.

One of the following:— Physics, Chemistry, a
language not already chosen.

B. For candidates who desire to proceed to the B.Sc. Degree in Arts;

I.—PRELIMINARY SUBJECTS

English Composition and Dictation,
English Grammar and Rhetoric,
History,
Arithmetic,

II.—FINAL SUBJECTS

English Literature,
Algebra, Part I,
Geometry, Part I,
French,
German,
Physics, or Chemistry, or Latin.

C. For candidates who desire to proceed to the B.Sc.
Degree in Applied Science:

I.—PRELIMINARY SUBJECTS

English Composition and Dictation,
English Grammar and Rhetoric,
History,
Arithmetic.

II.—FINAL SUBJECTS

English Literature,
Algebra, Part I,
Geometry, Part I,
French or German or Latin,
Algebra, Part II,
Geometry, Part II,
Trigonometry,
Chemistry or Physics.

Requirements in the Subjects of the Matriculation Examination.

English Composition and Dictation:

Candidates will write a short essay on a subject to be given at the time of examination.*

The Dictation will consist of a selection of English Prose read aloud to the Candidates who will be asked to reproduce it for examination in spelling and punctuation.

*See also composition requirements under the Department of English.

English Grammar and Rhetoric:

The main facts in the development of the Language, Etymology and Syntax, including the logical structure of the sentence, and the inflection, classification, and elementary analysis of words. The rhetorical structure of the sentence and paragraph. Text Books: The High School Grammar, Revised Edition. (Canada Publishing Co.) Sykes' Elementary Composition. (The Copp Clark Co.)

History:

The outlines of British History from 1066 to the present.
The outlines of Canadian History.

Arithmetic:

All the ordinary rules, including Square Root and a knowledge of the Metric System.

English Literature:

Every candidate is required to pass an examination based on the following texts. Precise knowledge of the subject matter and a reasonable acquaintance with form will be expected.

Scott's *Lady of the Lake* (Riverside Literature Series — Rolfe's ed., Houghton, Mifflin & Co.). Coleridge: *The Ancient Mariner*; Wordsworth: *Michael*, *Influence of Natural Objects*, *Nutting*, *Expostulation and Reply*, *The Tables Turned*, *The Solitary Reaper*, *Ode to Duty*, *Elegiac Stanzas*, *To the Rev. Dr. Wordsworth*, "She was a Phantom of Delight," *To the Cuckoo*, *The Green Linnet*, "Bright flower! whose home," *To a Skylark* ("Ethereal Minstrel! pilgrim of the sky!"), *Reverie of Poor Susan*, *To my Sister*, "Three years she grew," September, 1819, Upon the same occasion, and the following twelve sonnets: "Two Voices are there," "A flock of sheep that leisurely," "Earth hath not

anything," "It is not to be thought of," "Fair Star of evening," "O friend, I know not," "Milton, thou shouldst," "When I have borne in memory," "Brook, whose society," "Scorn not the sonnet," "Tax not the royal saint," "They dream not of a perishable home," (W. J. Gage & Co., Copp, Clark Co., or Morang Educational Co.) Shakspeare's Merchant of Venice (Rolfe's ed.— American Book Co.).

In addition to the above the candidate in 1910 will also be examined on the following texts, a general knowledge of the subject-matter being expected.

Scott's *Ivanhoe* (MacMillan's Pocket Classics); Irving's *Rip Van Winkle* (Ten Cent Classics — Educational Publishing Co., Boston); Longfellow's *Courtship of Miles Standish* (MacMillan's Pocket Classics). Scott's *Talisman* (MacMillan's Pocket Classics); George Eliot's *Silas Marner* (Cassel's National Library, Copp, Clark Co.); Arnold's *Sohrab and Rustum* (Ten Cent Classics—Educational Publishing Co., Boston); Tennyson's *Idylls of the King* (MacMillan's Pocket Classics).

The foregoing list of English texts follows the present requirements for Standards VI and VII of the school course, as authorized by the Department of Education. In event of any change authorized by the Department of Education, candidate may substitute the new requirements for the above.

Algebra, Part I:

Definitions, elementary rules, simple equations of one, two and three unknown quantities, problems, factoring, highest common factor, least common multiple, fractions, equations with fractions, quadratic equations, simultaneous equations of the second degree, powers and roots, indices, surds; as in Tory and Birchard's *Elements of Algebra* or C. Smith's *Elementary Algebra*.

Algebra, Part II :

The three progressions, rates, proportion, valuation, permutations and combinations, binomial theorem, logarithms.

Texts books as above.

Geometry, Part I :

Euclid, Books, I, II and III; deductions. Todhunter and Loney's Euclid or Hall and Steven's Euclid.

Geometry, Part II :

Euclid: Book IV; definitions of Book V; propositions 1, 2, 3, A, 4 and 33 of Book VI; deductions. Text Books as above.

Trigonometry :

Elements of Plane Trigonometry; as in Murray's Plane Trigonometry.

Physics :

Merchant and Fessenden's High School Physics, Part I Revised Edition (The Copp, Clark Co.), or an equivalent.

Chemistry :

Mill's Chemistry for Schools (Gage & Co.).

Latin :

Grammar, Translation at Sight and Prose Composition. Questions on Latin Accidence. Translation into Latin of easy phrases and sentences illustrating the rules of Latin Syntax. Sight Translation from easy Prose Authors.

Texts : (Caesar's *Bellum Gallicum*, Book IV, chapter XX-XXXVIII, and Book V, Chapter I to XXIII; Virgil's *Aeneid*, Book II, lines 1—505.

Greek :

Grammar. Translation at Sight and Prose Composition. The Composition will consist of easy sentences based on the prescribed texts, selected so as to illustrate Greek Accidence and the common rules of Syntax. Grammatical questions on passages from the prescribed texts and such other questions as naturally arise from the text will be set.

Text: Xenophon *Anabasis* I (as in White's First Greek Book).

French :

Grammar. Accidence and Syntax including translation of simple English sentences to test the candidate's familiarity with Elementary Grammar. Sight translation from modern French authors. Special study of the following selections :

Lamennais, *Paroles d'un Croyant*, Chapters VII and XVII; Perrault, *Le Maître Chat ou Le Chat Botté*; Dumas, *Un Nez Gelé*, and *La Pipe de Jean Bart*; Daudet, *La Dernière Classe*, and *La Chèvre de M. Seguin*; Legouvé, *La Patte de Dindon*; Pouvillon, *Hortibus*; Loti, *Chagrin d'un Vieux Forçat*; Molière, *l'Avare*, Acte III, Sc. 5 (*Est-ce à votre Cocher sous la mienne*); Victor Hugo, *Waterloo*, Chap. IX; Rouget de l'Isle, *La Marseillaise*; Arnault, *La Feuille*; Chateaubriand, *L'Exilé*; Théophile Gautier, *La Chimère*; Victor Hugo, *Extase*; Lamartine, *L'Automne*; De Musset, *Tristesse*; Sully-Prudhomme, *Le Vase Brisé*; La Fontaine, *Le Chêne et le Roseau*.

Labiche, *Le Voyage de Monsieur Perrichon*.

German :

Grammar. Accidence and Syntax including translation of simple English sentences to test the Candidate's familiarity with Elementary Grammar. Sight translation from Modern German Authors. Special study of the following selections :

Grimm, *Rotkäppchen*; Anderson, *Wie's der Alte macht*, *Das neue Kleid*, *Venedig*, *Rothschild*, *Der Bär*; Ertl, *Himmelsschüssel*; Frommel, *Das eiserne Kreuz*; Baumbach. Nico-

tiana, Der Goldbaum; Heine, Lorelei, Du bist wie eine Blume; Uhland, Schäfer's Sonntagslied, Das Schloss am Meere; Chamisso, Das Schloss Boncourt; Claudius, Die Sterne, Der Riese Goliath; Goethe, Mignon, Erlkönig, Der Sänger; Schiller, Der Jüngling am Bache.

Bumbach, Waldnovellen.

EQUIVALENT EXAMINATIONS

Certificates of having passed the whole or at least one-half of the subjects of any of the following examinations will be accepted pro tanto:

Province of Alberta: The Standard VII and VIII examinations.

Province of Saskatchewan: The Standard VII and VIII examinations.

Province of Manitoba: The Second Class Non-Professional Teacher's Certificate.

Province of Ontario: The Junior and Senior Teacher's Certificate examinations. The Junior and Senior Matriculation examination.

Province of Quebec: The Associate in Arts examination.

Province of New Brunswick: The examinations for Superior and Grammar School Licenses.

Province of Nova Scotia: The Leaving examination, Grades XI and XII.

Newfoundland: The Intermediate and Associate examinations.

Province of Prince Edward Island. The Leaving examination of Prince of Wales College. The examination for First Class Teacher's Licenses.

Province of British Columbia: The Junior, Intermediate and Senior Grade examinations.

Great Britain: The local examinations of the leading Universities and the leaving examinations of the Scotch Education Department.

Applications for exemptions from the Matriculation Examination, based on Certificates other than those mentioned above, will be considered on application.

SCHOLARSHIP

The following Scholarships are offered:

At the July examinations:

Five John A. McDougall Scholarships of \$50 each, donated by John A. McDougall, Esq., of Edmonton.

At the term examinations, 1910:

The John A. McDougall Scholarship of \$50, donated by John A. McDougall, Esq., of Edmonton.

Two Alexander Cameron Rutherford Scholarships of \$50 each, donated by the Hon. A. C. Rutherford, LL.D., of Strathcona.

The July Scholarships will be awarded on the results of the Standard VII examinations set by the Provincial Department of Education in conjunction with the Professors of the University. Candidates from private schools may also compete.

Competing candidates must pass on the whole of the Matriculation Examination, but in awarding the scholarships only the marks obtained in the final subjects will be counted.

The scholarships for the Term examination will be awarded to the three students of the First Year making the highest general average on the work of the two terms; provided, however, that such students must obtain a standing satisfactory to the Faculty.

COURSES OF STUDY.

I.—Courses Leading to the B.A. Degree:

The Courses of Study in the University leading to the B.A. Degree are divided into two groups,—Junior Courses and Senior Courses. The Junior Courses are designed for

students in the First and Second Years, the Senior Courses for the Third and Fourth Years. The Junior Courses are, in general, to be regarded as preparatory to the Senior Courses.

To obtain the B.A. Degree, a student must pass at least ten Junior Courses and six Senior Courses. In selecting subjects from the Junior Courses, the student must confine himself to certain well-defined groups with few options; in selecting from the Senior Courses, the student is left largely to his own discretion, the Elective System being introduced.

Except by special permission of the Faculty, students will not be permitted to enter upon their Senior Courses until they have passed all the requirements of the Junior Courses.

Junior Courses.

The subjects of study in the Junior Courses are as follows:

A.—FIRST YEAR

- 1.—English and History.
- 2.—Latin or Greek.
- 3.—Greek or Latin, (the one not already chosen)
or French or German.
- 4.—Mathematics.
- 5.—Physics.

B.—Second Year.

- 1.—English.
- 2.—Latin or Greek.
- 3.—History.
- 4.—Any two of the following: Greek or Latin, (the one not already chosen), French, German, Mathematics, Logic and Psychology, Chemistry.

The Junior Courses are divided into groups A. and B. corresponding to the First and Second Years. The order of these subjects may, however, be varied by permission of the Faculty, provided always that no subject of Group B shall be taken until the corresponding subject in Group A has been

passed. The details of the above courses will be found under the various Departments.

Senior Courses :

The subjects of study in the Senior Courses are as follows :

A.—Literary and Philosophical subjects :

- 1.—English.
- 2.—Latin.
- 3.—Greek.
- 4.—French.
- 5.—German.
- 6.—Philosophy.
- 7.—History.

B.—Scientific Subjects.

- 1.—Physics.
- 2.—Chemistry.
- 3.—Geology.
- 4.—Astronomy.
- 5.—Mathematics.

The Senior Courses are offered in the Third and Fourth Years only. Two Courses at least are offered in each subject, except in the case of Astronomy, one in the Third and one in the Fourth Year. Of the six Courses required of Candidates for the B.A. Degree, one at least must be taken from Group B. Candidates must continue one subject through two years and may by permission of the Faculty continue two subjects through two years. The details of the above Courses will be found under the various Departments.

II.—Courses leading to the B.Sc. Degree in Arts.

The Courses leading to the B.Sc. Degree in Arts are also divided into two groups: Junior and Senior Courses. The Junior Courses are designed for students in the First and

Second Years, the Senior Courses for students in the Third and Fourth Years. The Junior Courses in general to be regarded as preparatory to the Senior Courses.

To obtain the B.Sc. Degree a student must pass at least ten Junior Courses and six Senior Courses. In selecting subjects from the Junior Courses, the student must confine himself to certain well-defined groups with few options; in selecting from the Senior Courses the student is left largely to his own discretion, the Elective System being introduced.

Except by special permission of the Faculty, students will not be permitted to enter upon their Senior Courses until they have passed all the requirements of the Junior Courses.

Junior Courses.

The subjects of study in the Junior Courses are as follows:

A.—FIRST YEAR.

- 1.—English and History.
- 2.—French.
- 3.—German.
- 4.—Mathematics.
- 5.—Physics.

B.—SECOND YEAR.

- 1.—English.
- 2.—French.
- 3.—German.
- 4.—Chemistry.
- 5.—Mathematics. or Biology?

Senior Courses.

The subjects of study in the Senior Courses are as follows:

A.—Literary and Philosophical Subjects.

- 1.—English.
- 2.—French.

- 3.—German.
- 4.—Philosophy.
- 5.—History.

B.—Scientific Subjects.

- 1.—Physics.
- 2.—Chemistry.
- 3.—Geology.
- 4.—Astronomy.
- 5.—Mathematics.

The Senior Courses are offered in the Third and Fourth Years only. Two Courses at least are offered in each subject, one in the Third and one in the Fourth Year. Of the six Courses required of Candidates for the B.Sc. Degree, five must be selected from Group B and one from Group A. Candidates must continue two of the subjects chosen from Group B through two years. The details of the above Courses will be found under the various Departments.

III.—Courses Leading to the Degree of B.Sc. in Applied Science.

The Courses for the First and Second Years of Applied Science outlined below are such as to give that general foundation in Mathematics and Physical Sciences which is necessary in order to make specialization in the various branches of Engineering in the Third and Fourth Years possible. Further, the Courses are so planned, following the best practice, as to enable students, who may so desire, should laboratories and equipment not be ready for the Third and Fourth Years in the University, to enter one of the older Universities with similar standing.

A.—FIRST YEAR.

- 1.—English.
- 2.—Descriptive Geometry.

- 3.—Drawing.
- 4.—Lettering.
- 5.—Mathematics.
- 6.—Physics.
- 7.—Physical Laboratory.

B.—SECOND YEAR.

- 1.—Chemistry.
- 2.—Chemical Laboratory.
- 3.—Mechanical Drawing.
- 4.—Mapping.
- 5.—Mathematics.
- 6.—Mechanics of Machines.
- 7.—Physics.
- 8.—Physical Laboratory.
- 9.—Surveying.
- 10.—Shopwork.

FEES.

I.—In Arts:

- (a) Undergraduate and Conditioned Students:

Matriculation Fee	.....	\$ 5.00
For Instruction per Term	.....	10.00
For Students' Council	.....	2.00
- (b) Partial Students:

Registration Fee	.....	2.00
For Instruction per Term per Course	.....	3.00
- (c) Graduates:

Course for M.A.	.....	10.00
Course for M.Sc.	.....	10.00

II.—In Applied Science:

- (a) Undergraduates and Conditioned Students:

Matriculation Fee	.....	5.00
For Instruction per Term	.....	20.00
For Students' Council	.....	2.00

(b) Partial Students:

Registration Fee	4.00
For Instruction per Term per Course	6.00

III.—For Degrees:

B.A. Degree	5.00
B.Sc. in Arts	5.00
B.Sc. in Applied Science	10.00
M.A. Degree	10.00
M.Sc. Degree	10.00

Caution Money.—Every student is required to deposit \$5.00 caution money to cover damage done to furniture, apparatus, books, etc. This amount less deductions (if any) will be returned at the end of the session.

REGISTRATION

On or before the day set apart for the beginning of any Term, students must present themselves at the University Office for the purpose of registering for that Term and for the payment of the Term Fees. Each student will be given a registration ticket which will admit him to the University Classes. No student will be admitted to the University Classes without such registration ticket.

DISCIPLINE.

All students are expected to submit themselves cheerfully to the Statutes, Rules, Regulations and Ordinances of the University and no student will be permitted to continue in attendance at the University whose presence for any cause is deemed by the Senate prejudicial to the interests of the University.

ATTENDANCE.

1. Punctual attendance at all Classes is required of each student. Absence from lectures can be excused only by neces-

sity or duty, of which proof must be given to the Faculty. The number of absences, which shall cause the loss of a Term, shall in each case be determined by the Faculty. In no case will a student be permitted to come up for the Term Examination who has not attended seven-eighths of the lectures in each Course; provided, however, that excuses on the ground of sickness or domestic affliction will receive special consideration by the Faculty.

2. A record of attendance at lectures shall be kept by each Professor or Lecturer, who will report to the Faculty, as required from time to time, all cases of non-attendance.

3. Lateness, inattention, neglect of study, or disorderly conduct in the class-room will not be countenanced. In the case last mentioned, students may be required by the Professor or Lecturer to leave the room. Persistence in such offences shall, after admonition by the Professor, be reported to the President of the University, who may suspend from Classes pending the action of the Senate.

RESIDENCE

No College Residence has as yet been erected, but accommodation for students will be found in the City of Strathcona. The University will undertake to see that all students are properly cared for, either in a residence rented for the purpose or in private houses. The cost of Board and Lodging will be from \$18.00 per month upward.

SESSIONAL EXAMINATIONS.

Two final examinations are held each year, one at the close of each term. In addition there will be a monthly test examination in each subject. The marks obtained in these monthly test examinations will be reckoned along with the term examinations in deciding the standing of the students at the end of each term. In reckoning the students' standing one-third the marks in each subject will be assigned to the test examinations and two-thirds to the final examinations.

The names of successful students will be arranged in three classes at the end of each term; First Class, those who have obtained eighty-five per cent and over; Second Class, those who have obtained between sixty-five and eighty-five per cent; Third Class, those who have obtained between fifty and sixty-five per cent of the marks assigned to the subject.

HIGHER DEGREES.

I.—Degree of M.A.

The M.A. degree is offered in the University under the following conditions:

(a) Candidates must be Bachelors of Arts of at least one year's standing at the time the degree is conferred.

(b) They must follow a course of study the equivalent of one full year's work in the University. For the course of study two subjects must be selected from either Group A or Group B of the subjects of the Third and Fourth Years, one a Major and the other a Minor. The Major subject must be a subject followed by the candidate in his undergraduate course.

(c) Candidates must pass on the two Term examinations prescribed by the University in these subjects, and at the discretion of the Department in which his subjects lie may be required to pass an oral examination also.

(d) In addition a thesis must be presented on some topic connected with the Major subject.

II.—Degree of M.Sc.

The M.Sc. degree is granted in the University on the same conditions as the M.A. degree, provided however that the subjects chosen for the course of study must be taken from Group B of the subjects for the Third and Fourth Years.

Courses of Instruction

ENGLISH.

Immediately after registration, all Matriculants, whether they submit accredited certificates or not, are required to write a theme or composition, the subject to be chosen from a list provided by the Department. Should this theme fall below a standard of average excellence, the student will be required to take a special course in composition, lasting as long as the Department shall deem necessary. No credit toward the degree will be given for this work, but students assigned to the course must comply with its conditions and show satisfactory improvement in composition before they can advance to their degree.

The Junior Courses, Course I and Course II, are required of all students and must be taken in the First and Second Years. These two courses are planned as a sequence, the aim being to give the student, through first-hand acquaintance with the materials, a knowledge of the general history of English literature from the Anglo-Saxon period to the present time, and at the same time to provide him an adequate amount of practice in composition.

The Senior Courses, Course III and Course IV, are elective. They are intended to provide the student with the opportunity for a more thorough investigation of two significant aspects of modern literature.

Junior Courses:

Course I:—English Literature and Composition. This course consists of a study of typical masterpieces before 1700 including Chaucer's Prologue to the Canterbury Tales, Shakespeare's Merchant of Venice and Julius Caesar, Ben Jonson's Alchemist, Bacon's Essays and Milton's Minor Poems, supplemented by collateral reading assigned by the Professor. Themes fortnightly or oftener, at the pleasure of the Professor.

Course II:—A lecture course in the history of English literature consisting of a rapid resumé of the history of English Literature before 1700, followed by a detailed study of Eighteenth and Nineteenth century Literature. Text books: Anthologies of Eighteenth and Nineteenth century prose and poetry, supplemented by collateral reading. Themes at the pleasure of the Professor.

Senior Courses:

Course III:—Browning and Tennyson: a detailed study of the two representative poets of the Nineteenth century. Lectures, discussion and reports.

Course IV:—English Fiction: lectures on the development of English fiction, with analysis and discussion of representative novels of the Eighteenth and Nineteenth centuries.

CLASSICS.

The aim of the work in this Department is to give the student a reasonable mastery of the classical languages, and thereby to encourage ready and extensive reading in their literatures. To this end much attention will be devoted to the systematic upbuilding of a good working vocabulary, while the principles of syntax will be approached chiefly through prose composition exercises.

Side by side with these processes which have in view the cultivation of the ability to grasp thought in its Latin or Greek form, will stand frequent exercises in translation from the classics into idiomatic English, where the particular objects of concern will be the accurate choice of English words and the proper structure of English sentences. Much stress will be laid in the term finals upon translations from passages previously unseen, the more satisfactorily to test progress in the points indicated.

It is unlikely that all the work set down in the calendar will be covered in class: a considerable amount will be left for private reading.

Latin.

A preliminary course will be offered for students entering with a condition in Latin. This cannot be credited as university work, and is designed simply to enable students who have not had the opportunity elsewhere, to prepare for the Latin of the regular college courses.

Junior Courses.

Course I:—Authors: Cicero against Catiline I and IV and Sallust's *Bellum Catilinae*; Virgil, the *Aeneid*, I, II and IV. Latin composition exercises throughout the year, chiefly in the form of detached sentences. A knowledge of Roman history and antiquities sufficient for a proper appreciation of the authors read.

Course II:—Authors: Livy, Book I and selections II—X, Horace, Select Odes and Epistles. Exercises in continuous Latin composition throughout the year. History and antiquities.

Senior Courses.

Course III:—Authors: Lucretius, *De Rerum Natura*, I, III, V; Tacitus, the *Histories*, with parallel readings from Suetonius. Monthly Latin prose versions. Grammatical, philological, and literary studies.

Course IV:—Authors: Roman Literary Criticism (the *Pro Archia* and *Orator* of Cicero, the *Dialogus* of Tacitus, Quintilian's *Institutio Oratoria* X, and selections from Aulus Gellius); Roman Comedy (Plautus and Terence, each two plays). A Latin essay in each term. Elements of palaeography and text-criticism.

Greek.

Junior Courses.

Course I:—Authors: Xenophon, the *Cyropaedia* (selections); Homer, *Iliad* I, *Odyssey* IX. Elementary Greek grammar and composition. A knowledge of Greek history and antiquities sufficient for a proper appreciation of the authors read.

Note:—The year's work will commence with a full review of elementary Greek, both forms and syntax, and it will be possible for sincere students by taking five hours weekly throughout the year in place of the usual three hour course to obtain full freshman standing in the subject at the conclusion of the year.

Course II:—Authors: Plato, *Apologia Socratis*; Euripides, *Medea*. More advanced Greek composition, particularly of connected prose. History and antiquities.

Senior Courses.

Course III:—Authors: Herodotus, *Selections*; Aeschylus, *Prometheus Bound* and *Agamemnon*. Occasional Greek prose versions. Studies in grammar, philology, and literature.

Course IV:—Authors: Thucydides, VI and VII; Aristophanes, *The Clouds* and *The Frogs*. Occasional Greek prose versions. Studies in philology and literature.

MODERN LANGUAGES.

In the Junior Courses, the central aim will be the practical acquisition of the languages concerned. Special emphasis will be laid upon pronunciation, dictation and conversation. Passages of dictation and original composition in the foreign languages—such as answers to questions or the discussion of themes — will form part of all tests and final examinations. Besides works of average difficulty from modern writers, some productions of the classical authors will be studied, particularly in the second year.

In the Senior Courses, the students of the Third and Fourth Years will take their work together. This work will be done as much as possible in the foreign language. Dictation and composition will continue to be required of all students. Representative writers and their times will be carefully studied. In addition, some attention will be paid to the history of the languages as well as to the literatures of the older periods.

FRENCH

For students conditioned in French and German special courses will be arranged at the beginning of the session.

Junior Courses:

Course I:—The H. S. French Grammar (Copp, Clark Co.); Cameron, French Composition (Holt); Dumas, Napoléon (Macmillan); Erckmann-Chatrian, *Le Juif Polonais* (Heath); Le Sage, *Gil Blas* (Heath); Molière, *Le Bourgeois Gentilhomme* (Heath).

Supplementary Reading: Lamartine, *Scènes de la Révolution Française* (Heath).

Course II:—Elements of Historical French Grammar; Bévier, French Grammar (Holt); Cameron, French Composition (Holt); Voltaire, *Zadig* (Heath); Molière, *Le Misanthrope* (Heath); Balzac, *Le Curé de Tours*, etc. (Holt); Corneille, *Le Cid* (Holt); Poems (Regents' German and French Poems, (Holt).

Supplementary Reading; Corneille, *Cinna* (Holt); George Sand, *La Mare du Diable* (Ginn).

Senior Courses:

Course III:—(For 1909-1910). Pellissier, *Précis de l'Histoire de la Littérature Française*; Corneille, *Horace* (Holt); Pascal Selections (Heath); Molière, *l'Avare* (Heath); Racine, *Les Plaideurs* (Heath), *Iphigénie* (Am. Book Co.); La Bruyère, *Les Caractères* (Heath).

History of French Literature to the end of the Seventeenth Century.

Composition.

Supplementary Reading: La Fontaine, *Fifty Fables* (Am. Book Co.). Preliminary Reading to Fourth Year; Hugo, *Hernani* (Heath); *Contes des Romanciers Naturalistes* (Heath).

Course IV. — (For 1910-1911). Pellissier, *Précis de l'Histoire de la Littérature Française*; Voltaire, *Prose* (Heath); Beaumarchais, *Le Barbier de Séville* (Heath); Canfield, *French Lyrics* (Holt); Victor Hugo, *Ruy Blas* (Heath); Musset, *Trois Comédies* (Heath); Maupassant, *Selections* (Ginn); Rostand, *Cyrano de Bergerac* (Holt).

History of French Literature in the Eighteenth and Nineteenth Centuries.

Composition.

Supplementary Reading: Balzac, Eugénie Grandet (Holt); Preliminary to Fourth Year; Corneille, Polyeucte (Holt); Racine, Athalie (Heath).

GERMAN

Junior Courses:

Course I. — The High School German Grammar (Copp, Clark Co.); Horning, German Composition (Copp, Clark Co.); Goethe, The Vicar of Sesenheim (Holt); Freytag, Die Journalisten (Ginn); Schiller, Maria Stuart (Holt); Poems, (Regents' German and French Poems, Holt).

Supplementary Reading; Hoffman, Historische Erzählungen (Heath).

Course II.—Horning, German Composition (Copp, Clark Co.); Keller, Bilder der Deutschen Literatur (Am. Book Co., new ed.); Lessing, Minna von Barnhelm (Heath); Goethe, Egmont (Ginn); Stifter, Das Heidedorf (Am. Book Co.).

Supplementary Reading; Schiller, Die Piccolomini (Wal-lenstein, Holt).

Senior Courses:

Course III.—Lessing, Emilia Galotti (Heath); Goethe, Torquato Tasso (Heath); Schiller, Wallensteins Tod (Wallenstein, Holt), Heine, Die Harzreise (Heath); Klenze, Deutsche Gedichte, pp. 1-130 (Holt).

History of German Literature to the death of Schiller (1805).

Composition.

Supplementary Reading: Freytag, Karl der Grosse (Holt); Grillparzer, Der Traum, ein Leben (Heath); Goethe, Faust, Part I, (Heath).

Course IV.—Eichendorf Aus dem Leben eines Taugenichts (Holt); Grillparzer, Der arme Spielmann (Heath); Sappho (Ginn); Sudermann, Teja (Heath); Haptmann, Die Versunkene Glocke (Holt); Klenze, Deutsche Gedichte, p. 131 to end. (Holt).

History of German Literature in the Nineteenth Century.
Composition.

Supplementary Reading: Suderman, *Der Katzensteg* (Heath); Lessing, *Nathan des Weise* (Holt); Goethe, *Faust*, Part I., (Heath).

HISTORY.

Junior Courses:

Course I.—The main outlines of British and Canadian History. This course is taken as a part of the English course of the First Year.

Course II.—The main outlines of European History.

The Junior Courses are general in their character, being planned so as to give to the student a suitable back-ground for subsequent reading. At the same time they serve as an introduction to the more intensive Senior Courses which are elective.

Senior Courses:

Course III.—European History from 475 to 1600. This course will include a more or less intensive study of some of the most important events of this period.

Course IV.—Modern History.—From 1600 to 1900.

Course V.—English Constitutional History.

PHILOSOPHY.

Junior Courses:

Course I.—Psychology.—An introductory course on general and experimental psychology. Text-book.—James, *Psychology*, Briefer Course. Logic.—An introductory course on the scope and methods of Logic. Text-book.—Mellone, *Introductory Text-book of Logic*.

Senior Courses:

The details of the Senior Courses will be announced at the beginning of the Session.

MATHEMATICS.

Junior Courses:

Course I:—(1) Geometry: The equivalent of Books IV and VI of Euclid with supplementary matter. Text-book, Hall and Stevens' Euclid.

(2) Algebra.—Simple Equations of one, two and three unknown quantities, Quadratic Equations of one and two unknown quantities, Progressions, Ratio, Proportion, Variation, Permutations and Combinations, Binomial Theorem, Logarithms, Theory of Quadratic Equations. Text-book, Hall and Knight's Elementary Algebra; Tory and Birchard's Elements of Algebra.

(3) Trigonometry, Plane Trigonometry including the solution of Triangles. Text-book, Murray's Plane Trigonometry.

Course II (1) Geometry.—Exercises in Plane Geometry, including Loci, Transversals, Pole and Polar; elements of Solid Geometry; elements of Geometrical Conic Sections. Text-Book, Wilson's Solid Geometry and Conic Sections.

(2) Algebra.—Exponential and Logarithmic Series; Properties and Solutions of Higher Equations; Complex Numbers; Graphic Algebra.

Senior Courses:

Course III. (1) Analytical Geometry.—The Point, the Straight Line, the Circle, the Ellipse, the Hyperbola. Text-book, Tanner and Allen's Analytic Geometry.

(2) Calculus.—The elements of the Differential and Integral Calculus. Text-book, Chandler's Calculus.

PHYSICS.

Junior Courses:

Course I.—Elementary Course in General Physics. This Course is intended to be an introduction to the courses in Chemistry and other branches of Natural Science, and to the more detailed courses in Physics of the Third and Fourth Years. The more important principles in each branch of the subject are treated and illustrated.

Senior Courses:

Course II.—The elements of Kinematics, Kinetics, Statics and Hydrostatics; Laws of Energy, Sound, Light, and Heat.

Two lectures per week fully illustrated with one Laboratory period of four hours per week. Text-books, Watson; Tory and Pitcher.

Sound.—Velocity of sound; determination of rates of vibration of tuning forks; resonance; laws of vibration of strings.

Light.—Photometry; laws of reflection and refraction; indices of refraction; focal lengths and magnifying powers of mirrors, lenses, telescopes and microscopes; the sextant spectroscope, spectrometer, diffraction grating, optical bench and polariscopes.

Heat.—Construction and calibration of thermometers; melting and boiling points; air thermometer; expansion of solids, liquids, and gases; calorimetry; specific and latent heats; laws of vapour pressure; radiation; the mechanical equivalent of heat.

Course III.—Electricity and Magnetism. Two lectures per week fully illustrated with one Laboratory period of four hours per week. Text-books: Watson; Tory and Pitcher.

Measurement of pole strength and moment of a magnet; the magnetic field; methods of deflection and oscillation; comparison of moments and determination of elements of earth's magnetism; fractional electricity; current electricity; complete course of measurements of current strength, resistance and electromotive force; calibration of galvanometers; the electrometer; comparison of condensers; electromagnetic induction; discharge of electricity through gases; radio-activity; electrical waves.

CHEMISTRY.

Junior Courses:

Course I.—General Chemistry.—Elementary Chemical Theory, the principal elements and their compounds, the Laws of Chemical Combinations, Chemical formulae and equations, the preparation of the more important elements and their compounds.

Practical Chemistry.—A Laboratory course, one period of four hours per week.

Additional Courses will be planned at the beginning of the session to meet the requirements of students.

GEOLOGY.

Senior Courses:

Course I.—A general survey of the field of Geology. Special attention will be devoted to Dynamical Geology and to Historical Geology including a description of the fauna and flora of the earth during the summer periods of its past history. Special geological excursions will be planned during the early part of the year. Text-books.—Scott, *An Introduction to Geology*. Reference Books.—Dawson, *Handbook of Geology*; Dana, *Manual of Geology*.

Additional courses will be planned to meet the requirements of students.

APPLIED SCIENCE.

Geometry.—Exercises in Plane Geometry, including loci, transversals, pole and polar, etc., elements of Solid Geometry, elements of Geometrical Conic Sections. First Year (first term). Text-book: Wilson's *Solid Geometry and Conic Sections*.

Algebra.—Miscellaneous theorems and exercises, logarithms and use of mathematical tables, exponential and other series, properties and solutions of higher equations, complex numbers, graphic algebra with an introduction to Analytic Geometry. First Year (second term)

Analytical Geometry.—The point, straight line, circle, parabola, ellipse and hyperbola. Second Year (Second Term).

Calculus.—Differentiation of functions of one or more variables, successive differentiation, tangents, etc., multiple points, symptotes, curvature, maxima and minima, integration with applications to areas, volumes, moments of inertia, etc. Second Year (First Term).

Mechanics.—Kinematics, Kinetics of a Particle, Statics, Second Year. (First and Second Term).

Higher work in Calculus and Mechanics will be given in the Third Year.

Experimental Physics.—(See Senior Courses under the Department of Physics).

Chemistry :

A course of lectures on Elementary Chemical Theory and on the principal elements and their compounds. The lectures are fully illustrated by means of experiments. Second Year. (First and Second Term).

English.—See Course I under English.

Chemical Laboratory :

Experiments illustrative of the laws of chemical combination, the preparation of pure chemical compounds and elementary. Qualitative Analysis. Second Year. (First and Second Terms).

Mechanics of machines :

Discussion of the principles involved in the simpler machines, constrained motion, velocity and acceleration in mechanisms, analysis and classification of the simpler machines. (Second Year. Second Term).

Surveying :

Elementary Course in field work including chaining, rodding, chain surveys, micrometer and compass surveys and practice with the level and transit. (First Year. Second Term).

Advanced Course in field work as follows: level and transit practice including the adjustments of the instruments; a survey and location of a railway line with determinations of topography and contours and subsequent staking out for construction; survey illustrating methods of mine surveying. (Second Year. Second Term).

A lecture course in surveying, dealing with chain and angular surveying, construction, adjustment, use and limita-

tion of the transit, level, micrometer, compass and minor field instruments, topography; leveling, contour surveying; description for deeds, general land systems of the Dominion and Provinces. (Second Year. First and Second Terms).

Descriptive Geometry:

Problems on straight line and plane; projections of plane and solid figures; curved surfaces and tangent planes; intersections of surfaces; axometric projections; shades and shadows. (First Year. First and Second Term).

Drawing:

Geometrical Drawing, Freehand Lettering and Elementary Mechanical Drawing. (First Year. First and Second Term).

Mechanical Drawing:

Elementary principles of mechanical drawing and draftsmanship; preparation of working drawings of simple machine details; making dimensioned sketches of machines and their parts; preparation of tracings and blue prints. (Second Year. First Term).

Mapping:

Preparation of maps, plans, estimates, sections, etc., from notes taken in the field. (Second Year. Second Term).

Shopwork:

Practical instruction will be given in Carpentry and joiner work, pattern making, smithwork, foundry work, and machine shop work. First and Second Years.

Third and Fourth Years Applied Science.

Instruction will be provided in the following subjects: Municipal Engineering, Railway Engineering, Hydraulic Engineering, Surveying, Geology, Bacteriology, Astronomy, Geodesy, Mapping and the Design of Water Supply and

Sewerage Works, Purification Works, Bridges, Structural Work, Roads, Pavements, etc. Arrangements will be made whereby the usual shopwork instruction will also be given, and a Laboratory, in which Chemical and Hydraulic experiments may be carried on, and in which provision will be made for the testing of structural building and municipal material, will form part of the teaching equipment of the University.

Details of these courses will be published in the Calender for 1910-11.

THE UNIVERSITY LIBRARY.

The Library contains several thousand volumes, including general works of reference, and books covering the reading required of students in the Arts and Science Courses. Provision has been made for the steady growth of the Library from year to year.

A special feature is a collection of Canadian books which is being presented to the Library through the generosity of Dr. A. C. Rutherford.

The Library is also supplied with a number of daily newspapers, as well as many of the leading magazines and reviews.

The following are the regulations regarding the use of the Library :—

1. All members of the Staff, and registered students in attendance upon lectures at the University are entitled to the use of the books.

2. No one may remove a book from the Library until a receipt has been given to the Librarian upon a printed form provided for that purpose. When the book is returned, the borrower must see that his receipt is cancelled before the book is replaced on the shelf.

3. The borrower is held responsible for the loss of a book or any damage it receives while it is charged to him

4. All books must be returned within two weeks of the date on which borrowed. Any one who wishes to use a book

longer may have it renewed, on request, but such books may be called in at any time.

5. Reference books,—i.e. those which are required by a number of students at the same time—are kept on a Reference Shelf, where they may be consulted at any time, but may not be taken out during Library hours.

6. No one may write upon or otherwise deface any books or magazines belonging to the Library.

7. Silence must be strictly observed in the Library.

8. Any one who repeatedly ignores any of these regulations may be deprived of the use of the Library.

UNIVERSITY BOOK STORE.

Textbooks prescribed in the University Calendar for the use of students in their courses, may be purchased through the University Book-Store which is conducted as a part of the Library.

Gowns may be obtained in the same way.

Student Societies

Students' Council

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Vice-Pres, MISS A. K. WILSON

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Final Examinations

: : First Term : :



Session of 1908 - 09

UNIVERSITY OF ALBERTA.

FINAL EXAMINATION.—FIRST TERM.

FIRST YEAR.

English Literature.—Part I.

Friday, January 22nd., 1909.—Morning 10 to 12

I.—Contrast the tone and spirit of Anglo-Saxon poetry with the tone and spirit of the literature growing up in England after the Norman Conquest.

II.—Chaucer.

a)—Chaucer and the Court: (1) What English sovereigns occupied the throne during Chaucer's lifetime? (2) With the court-life of which one of these was Chaucer best acquainted, and in what way? (3) What short poem of Chaucer's reflects his dissatisfaction with the treatment accorded him by another English sovereign?

b)—What characters in the Prologue to the "Canterbury Tales" reflect most clearly the teachings of Wiclif? Describe these characters.

c)—Suggest a possible connection between the poem ascribed to Langland and one of the characters in the Prologue.

d)—Identify, translate, and comment on the following passages:

1)—"And evermore he hadde a sovereyn prys.
And though that he were worthy, he was wys,
And of his port as meke as is a mayde.
He never yet no vileinye ne sayde
In all his lyf, un-to no maner wight."

- 2)—"Wel semed ech of hem a fair burgeys,
To sitten in a yeldhalle on a deys."
- 3)—"Wel coude he fortunen the ascendent
Of his images for his pacient."
- 4)—"But first I pray you, of your curteisye,
That ye n'arete it nat my vileinye,
Though that I pleylnly speke in this matere,
To telle you of hir wordes and hir chere."
- e)—Quote the passage in the Prologue beginning "Whan
Zephirus eek", and ending "couthe in sondry londes",
and scan the lines.

FIRST YEAR

English Literature.—Part II.

Friday, January 22nd., 1909.—Afternoon, 2 to 4.

III.—Explain briefly the special significance of each of the following in the development of the drama:

- a)—Marlowe's "Dr. Faustus."
- b)—The Easter Trope of the "Three Maries."
- c)—"Gammer Gurton's Needle."
- d)—Bishop Bale's "Kyng Johan."
- e)—Gorboduc.

IV.—Shakspeare.

- a)—Name three plays, each belonging to a different type of the drama, which Shakspeare composed before 1595.
- b)—Of what importance is Francis Meres, in a study of Shakspeare's plays?
- c)—"The Merchant of Venice."
 - 1)—What stories, well known to Elizabethan readers, does Shakspeare combine to form the "Merchant of Venice?"
 - 2)—Suggest one possible source for each story.
 - 3)—Did Shylock seriously intend from the outset to exact the pound of flesh, or did later circumstances cause him to take seriously what had at first been spoken in jest? Give the evidence for both views.

- 4)—State the advantages and the disadvantages of Shylock as the “star part” for an actor in the “Merchant of Venice.”

Comment on the following passages:

v)—“I will run as far as God has any ground.”

w)—“Nay more, while grace is saying, hood mine eyes
Thus with my hat.”

x)—“What page’s suit she hath in readiness.”

y)—“My gossip, Report.”

z)—“You stand within his danger.”

- 6)—Quote Portia’s speech in the Trial Scene from
“The quality of mercy,” to “better than his crown,”
and scan the lines.

V.—Write an essay of not less than two pages nor more than four, discussing the characters of the Prince of Morocco, the Prince of Arragon, and Bassanio.

SECOND YEAR

English Literature.—Part I.

Friday, January 22nd., 1909.—Morning 10 to 12.

I.—Anglo-Saxon Literature.

- a)—In what manuscripts has the bulk of Anglo-Saxon Literature been preserved?
- b)—What contributions did King Alfred make to Anglo-Saxon Literature?
- c)—Caedmon ?
- d)—Identify the following characters from the poem “Beowulf”: (1) Wiglaf, (2) Hygelac, (3) Beowulf, (4) Hunferth, (5) Hrothgar.
- e)—What inferences as to the social customs of the Anglo-Saxons can you draw from “Beowulf” ?
- f)—The form of “Beowulf”: (1) To what class of poetry does “Beowulf” belong ? (2) Through what probable stage did it reach its present form ?

II.—The Arthurian Cycle.

- a)—Mention the most important steps in the growth of the Arthurian Cycle from Nennius to Malory.
- b)—Name the most important motives in the Arthurian Cycle.
- c)—Describe (1) the visit of the Green Knight to Arthur’s Court (“Gawayne and the Green Knight”); or (2) the death of Arthur (Malory’s “Morte Darthur”).

III.—Chaucer.

- a)—Describe the “Prologue to the Legende of Good Women.”
- b)—Describe minutely three characters from the “Prologue to the Canterbury Tales.”

SECOND YEAR

English Literature.—Part II.

Friday, January 22nd., 1909.—Afternoon, 2 to 4.

IV.—Outline very briefly the history of English Literature from 1400 to 1557, being careful to indicate why the foregoing dates are selected.

V.—Write a brief essay (not less than one page nor more than two) contrasting Shakspeare and Ben Johnson as dramatists.

} Answer either IV
or V. Do not an-
swer both.

VI.—The Sonnet.

a)—Discuss briefly the general laws governing the structure and content of the sonnet, and indicate the rhyme-schemes of the three sonnet-forms prevalent in English verse.

b)—Name the most important sonnet-sequences in Elizabethan poetry.

c)—State, very briefly, the two general topics dealt with by Shakspeare in his sonnets, and the critical problem pertaining to Shakspeare's sonnet-sequence.

VII.—Comment briefly on the prose-style of the Seventeenth Century in relation to:

a)—The King James Version of the "Bible."

b)—Bacon.

c)—Burton.

d)—Bunyan.

e)—Dryden.

SECOND YEAR.

English Literature.—Browning, Part I.

Monday, January 25th., 1909.—Morning, 10 to 12

- I.—State briefly the most important facts of Browning's life, and name the most important contemporary writers with whom he was associated.
- II.—What Nineteenth Century poets most influenced his work? Illustrate.
- III.—“Paracelsus.”
 - a)—Summarize the historical material on which Browning based his study of “Paracelsus.”
 - b)—State the theme of Browning's Poem, and show, through analysis of the poem, how Browning develops the theme.
 - c)—Comment on the following passage from “Paracelsus”:
...“Nor let your gifts create
Scorn or neglect of ordinary means.”
- IV.—Describe the successive episodes of “Pippa Passes,” bringing out, in each episode, the psychological moment when Pippa “passes.”
- V.—Analyze the plot of “A Blot in the ‘Scutcheon’” on the basis of dramatic technique, and discuss the most important characters.
- VI.—What general inferences as to Browning's attitude toward life can you draw from the three foregoing poems?

SECOND YEAR.

English Literature.—Browning, Part II.

Monday, January 25th., 1909.—Afternoon, 2 to 4.

I.—Define the dramatic monologue, discuss Browning's aptness for that type of composition, and describe three of Browning's dramatic monologues.

II.—Discuss "Childe Rolande to the Dark Tower Came" in regard to:

a)—romantic and imaginative qualities.

b)—possible interpretations if treated as an allegory.

III.—Discuss each of the following poems as typical of a distinct group of Browning's poems. Evince in each case familiarity with other poems belonging to each group.

a)—"Fra Lippo Lippi."

b)—"A Grammarian's Funeral."

c)—"La Saisiaz."

FIRST YEAR.

FRENCH.

Translation.

Thursday, January, 28th., 1909.—Morning, 10 to 12.

1.—Translate into English:

Quoiqu'il suivit probablement de son regard d'aigle les évènements européens, Napoléon était, en apparence, entièrement soumis à sa fortune. Personne même ne doutait qu'avec le temps il ne s'habituaît à cette vie nouvelle, entouré comme il était par l'amour de tous ceux qui s'approchaient de lui, lorsque les souverains alliés se chargèrent eux-mêmes de réveiller le lion, qui probablement ne dormait pas.

Napoléon habitait déjà depuis plusieurs mois son petit empire, lorsqu'il fut secrètement averti que l'on venait de débattre son éloignement. La France, par l'organe de M. de Talleyrand, réclamait à grande force, au congrès de Vienne, cette mesure, comme indispensable à sa sûreté. Elle faisait remarquer que, s'il se laissait de son exil, l'illustre proscrit pouvait en quatre jours passer à Naples, et, de là, avec l'aide de son beau-frère Murat qui y régnait encore, descendre à la tête d'une armée dans les provinces de la haute Italie, déjà mécontentes, les soulever, et renouveler ainsi la lutte mortelle qui venait de se terminer.

- a).—Suivît, s'habituaît. Give the rules for these uses of the subjunctive. Characterize the "ne" with s'habituaît.
- b).—Write the 3rd. sing. pres. indic. of soumis, dorment, débattre, régnait, soulever, renouveler.

II.—Translate into English:

Cependant l'empereur n'était pas sans inquiétude. Jusqu'alors il n'avait eu affaire qu'aux populations, et leur enthousiasme n'était pas douteux, mais aucun soldat ne s'était présenté, aucun corps organisé ne s'était rallié à la petite armée, et c'était avant tout sur les régiments envoyés à sa rencontre que Napoléon désirait que sa présence opérât. Le moment tant craint et tant désiré arriva enfin, entre la Mure et Vizille: le général Cambronne, marchant à l'avant-garde avec quarante grenadiers, rencontra un bataillon envoyé de Grenoble pour fermer la route, le chef du détachement refusa de reconnaître le général Cambronne et celui-ci envoya prévenir l'empereur de ce qui arrivait.

Napoléon suivait la route, dans une mauvaise voiture de voyage que l'on s'était procurée à Gap, lorsqu'il apprit cette nouvelle: il fit aussitôt approcher son cheval, monta dessus et s'avança au galop jusqu'à cent pas, à peu près, des soldats qui formaient la haie, sans qu'un seul cri ni une seule acclamation saluassent sa personne.

Le moment de perdre ou de gagner la partie était venu. La disposition du terrain ne permettait pas de reculer; à gauche de la route, une montagne à pic; à droite, une petite prairie, de trente pas de large à peine, bordée par un précipice, en face, le bataillon sous les armes, s'étendant du précipice à la montagne.

- a).—**Opérât, saluassent.** Give the rules for these uses of the subjunctive.
- b).—State the rules for agreement of the past participle exemplified in this extract. Range all French examples in the passage under their respective rules.
- c).—Give the 3rd. sing. fut. indic. of **craint, envoyé, prévenir, apprit, fit, s'étendant.**

III.—Translate into English:

Cependant, si la victoire était moins décisive qu'elle n'aurait pu l'être, ce n'en était pas moins une victoire. L'armée prussienne, en pleine retraite, avait, en se retirant par sa gauche, démasqué l'armée anglaise, qui se trouvait alors la plus avancée. Napoléon, pour l'em-

pêcher de se rallier, détacha après elle Grouchy avec trente-cinq mille hommes, lui ordonnant de la presser jusqu'à ce qu'elle fasse tête. Mais Grouchy va faire, à son tour, la même faute que Ney ; seulement les conséquences en seront terribles.

Si habitué que fût le général en chef anglais à la rapidité des coups de Napoléon ,il avait cru arriver à temps aux Quatre-Bras pour faire sa jonction avec Blücher.

- a).—**N'aurait pu.** What is the rule for this use of "ne?"
- b).—**Fasse, fût.** Give the rules for these uses of the subjunctive.
- c).—Write the past indefinite of **se trouvait**.

IV.—Translate into English :

Néanmoins il était triste. Il se passait peu de jours qu'il ne pleurât sa femme en secret, et, quoique la solitude commençait à lui peser, il était plus effrayé de former une union nouvelle que désireux de se soustraire à son chagrin. Il se disait vaguement que l'amour eût pu le consoler, en venant le surprendre, car l'amour ne console pas autrement. On ne le trouve pas quand on le cherche ; il vient à nous quand nous ne l'attendons pas. Ce froid projet de mariage que lui montrait son père, cette fiancée inconnue, peut-être même tout ce bien qu'on lui disait de sa raison et de sa vertu, lui donnait à penser. Et il s'en allait songeant, comme songent les hommes qu n'ont pas assez d'idées pour qu'elles se combattent entre elles, c'est à dire ne se formulant pas de belles raisons de résistance et d'égoïsme, mais souffrant d'une douleur sourde, et ne luttant pas contre un mal qu'il fallait accepter.

George Sand.

FIRST YEAR.

FRENCH.

Dictation, Grammar and Composition.

Thursday, January, 28th., 1909.—Afternoon, 2 to 4

I.

Dictation : **Napoléon** (Dumas), p. 48, lines 1 to 20.

II.

- 1.—Name the principal parts of a French verb. Show, with the verb **vendre**, how the tenses are derived from these parts.
- 2.—When are verbs of wishing followed by the subjunctive? When by an infinitive? Illustrate. Does the same rule apply to verbs of ordering? Give examples.
- 3.—When are verbs of believing followed by the subjunctive? Give a full answer with French examples.
- 4.—Give French sentences to show when the pleonastic “**ne**” is used along with the subjunctive. Add explanatory remarks where necessary.
- 5.—State the rules for the subjunctive in adjective clauses. Give French examples.

III.

Translate into French :

- 1.—Although they are neighbors, we have not seen them yet.
- 2.—The troops had just gone when we arrived.
- 3.—I want a man whom I can trust.
- 4.—We must take leave of him before we go.

- 5.—The meadow was scarcely twenty yards wide.
- 6.—He rose in order that everybody might see him
- 7.—These few words had opened my eyes.
- 8.—No one has anything to reproach me with.
- 9.—Would not the soldiers have complained?
- 10.—I cannot hope they will be here when I arrive.
- 11.—He feared he might lose them as on the day before
- 12.—After looking at the letter, he gave it to me.
13. We had been ordered never to lose sight of them.
- 14.—That matters little to me provided you come.
- 15.—Do not write to me unless I write to you first.

IV.

Write answers in French to any two of the following, — the combined answers to consist of not fewer than 75 words:

- 1.—Quelle était la vie de Napoléon sur l'île d'Elbe?
- 2.—Quels étaient quelques-uns des dangers du voyage de la Corse jusqu'au golfe Juan?
- 3.—Racontez quelques-uns des événements de la marche à Paris?
- 4.—Comparez les deux voies qui étaient ouvertes à Napoléon après son installation à Paris.
- 5.—Comment les officiers de Napoléon l'ont-ils sauvé après la bataille de Waterloo?
- 6.—Décrivez les premiers jours de la vie de Napoléon à Sainte-Hélène.
- 7.—Quel était, selon Dumas, le caractère des actions de sir Hudson Lowe à l'égard de Napoléon? Expliquez.

SECOND YEAR.

FRENCH.

Translation.

Thursday, January 28th., 1909.—Morning, 10 to 12.

I.—Translate into English: **Le Petit Chose**, p. 45, l. 24 to p. 47 l. 16.

a).—**Lise** (p. 45, l. 26). Give the rules for the mood and tense.

b).—Give (1) the principal parts of **dépourvue** and **assis**, (2) the 1st. sing. past indefinite of **parvins** and **atteignis**, (3) the 1st. plur. pres. subjunctive of **résolus** and **souriant**.

II.—Translate into English: **Le Cid** (ed. Joynes) p. 20, l. 91 to p. 21, l. 124.

a).—Mark the scansion of lines 95, 99, 106, 122.

b).—Define the various kinds of rhymes and point out noteworthy examples in the above extract.

III.—Sketch the life of Alphonse Daudet. What relation does **Le Petit Chose** bear to it?

IV.—Translate into English:

Pierre Corneille est d'autant plus admirable, qu'il n'était environné que de très mauvais modèles quand il commença à donner ses tragédies. Ce qui devait encore lui fermer le bon chemin, c'est que ces mauvais modèles étaient estimés; et, pour comble de découragement, ils étaient favorisés par le cardinal Richelieu, le protecteur des gens de lettres, et non pas de bon goût. Il récompensait de méprisables écrivains, qui d'ordinaire sont rampants; et, par une hauteur d'esprit si bien placée

ailleurs, il voulait abaisser ceux en qui il sentait avec quelque dépit un vrai génie, qui rarement se plie à la dépendance. Il est bien rare qu'un homme puissant, quand il est lui-même artiste, protège sincèrement les bons artistes.

Corneille eut à combattre son siècle, ses rivaux, et le cardinal de Richelieu. Je ne répéterai point ici ce qui a été écrit sur **Le Cid**. Je remarquerai seulement que l'Académie, dans ses judicieuses décisions entre Corneille et Scudéri, eut trop de complaisance pour le cardinal de Richelieu, en condamnant l'amour de Chimène. Aimer le meurtrier de son père, et poursuivre la vengeance de ce meurtre, était une chose admirable. Vaincre son amour eût été un défaut capital dans l'art tragique, qui consiste principalement dans les combats du cœur. Mais l'art était inconnu alors à tout le monde, hors à l'auteur.

Le Cid ne fut pas le seul ouvrage de Corneille que le cardinal de Richelieu voulut rabaisser. L'abbé d'Aubignac nous apprend que ce ministre désapprouva **Polyeucte**.

La quantité de pièces indignes de lui qu'il fit, plusieurs années après, n'empêcha pas la nation de le regarder comme un grand homme; ainsi que les fautes considérables d'Homère n'ont jamais empêché qu'il ne fût sublime. C'est le privilège du vrai génie qui ouvre une carrière, de faire impunément de grandes fautes.

Voltaire.

SECOND YEAR.

FRENCH.

Dictation, Grammar and Composition.

Thursday, January 28th., 1909.—Afternoon, 2 to 4.

I.

Dictation: **Le Petit Chose**: p. 113, line 21 to p. 114, line 9.

II.

- 1.—Give French sentences to illustrate the various kinds of rhetorical inversion of subject and predicate.
- 2.—How is the passive voice formed in French? What are the substitutes for this form? Illustrate.
- 3.—State the distinction in use between the past indefinite, the past definite and the imperfect tenses. Give examples.
- 4.—Show by examples when the subjunctive is used in principal sentences.
- 5.—Give the rules for the sequence of tenses in conditional clauses and illustrate with examples.
- 6.—State the cardinal principles for the agreement of the past participle in French. Indicate, with examples, some noteworthy applications of these principles.

III.

Translate into French:

- 1.—If I had made him study his lessons better, he would have become a better man.
- 2.—Were it only a few lines, I should like you to write to me.
- 3.—Whatever men may do, they cannot escape death.

- 4.—Are you not a pretty good judge of books? Yes, I never tire of reading them.
- 5.—We are anxious that he should come to see us when he visits our city.
- 6.—Are you not afraid he will be able to prevent your intentions from being fulfilled?
- 7.—They cannot trust you unless you explain to them what you meant.
- 8.—Even if it should rain, I must go down to-morrow morning on business.
- 9.—You may say what you like, young people will have their own way.
- 10.—Although he paid me many compliments at first he finally insulted me.

IV.

Les Adieux de Marie Stuart (German and French Poems, p. 75 sq.)

Re-write the thought of this poem in simple French prose. The version given must be somewhat original in diction and contain not fewer than 100 words.

SECOND YEAR.

GERMAN.

Translation.

Wednesday, January 27th., 1909.—Morning, 10 to 12.

- I.—Translate into English: *Die Jungfrau von Orleans* (ed. Nichols) p. 36, line 817 to p. 37, line 848.
 - a).—What are the references in lines 817-819 and 822-823?
 - b).—Write the imperfect indicative of *verschwind* and the imperative of *weiß*.
- II.—Translate into English: *Ibid*, p. 158, line 3261 to p. 159, 3288.
 - a).—Give the rules for the use of *hätte* (l. 3261) and *schlage* (l. 3280).
 - b).—Decline through sing. and plur. *jedes Herz* and *eine Sügnerin*.
- III.—Sketch the life of Schiller. What difficulties beset the production of a play with the Maid of Orleans as its subject?
- IV.—Translate into English:

Die große deutsche Entdeckung der Einheit aller Naturkräfte, des Gesetzes, daß keine Kraft jemals verloren geht, sondern sich nur, wenn sie zu verschwinden scheint, in eine andere verwandelt, hat in den Augen der Physiker die alten Sonnenanbeter wieder zu Ehren gebracht, denn nunmehr wissen wir, daß nicht nur alles organische Leben unserer Erde, sondern auch jede mechanische Bewegung der unbelebten Stoffe auf derselben von den Sonnenstrahlen geweckt werden muß. Wenn der Glutball unseres Centralkörpers im Osten emporsteigt, erwacht das Naturleben, welches ohne seine Strahlen nicht gedacht werden kann, und jubelt ihm entgegen. An jedem Orte, den seine durchdringenden Lichtblicke treffen, steigt ein Strom

erwärmter Luft in die Höhe, um sich als frische Brise, die unsere Schiffe und Windmühlen treibt, oder als wilder Orcan, der Städte und Landstrecken verwüftet, in die weniger erwärmten Regionen zu ergießen. An den Oberflächen der Meere verdunsten täglich ungeheure Massen Wasser im Sonnenscheine, um mit der erwärmten Luft emporzusteigen und den ewigen Kreislauf von neuem zu beginnen, in welchem es, wie der Dichter sagt, der menschlichen Seele gleicht. Nah oder fern vom Ufer fällt es als Nebel, Regen, Schnee oder Hagel zum Boden nieder.

SECOND YEAR.

GERMAN.

Dictation, Grammar and Composition.

Wednesday, January 27th., 1909.—Afternoon, 2 to 4

I.

Dictation: *Egmont* (ed. Deering), p. 11, line 14 to 12, line 16.

II.

- 1.—What prefixes of verbs may be either separable or inseparable? What distinctions of meaning and use characterize the two classes? Give German examples.
—State the peculiarities of usage of the German modal auxiliaries and illustrate each.
- 2.—How do you express the passive voice of verbs that govern the dative case? Give several examples and show what other renderings are possible.
- 4.—Give the various uses of the subjunctive in German and illustrate.
- 5.—Make a list of German sentences to show how verbal forms in *-ing* are rendered in German.

III.

Translate into German:

- 1.—He would be sorry that he had not sooner.
- 2.—If the hare had not slept, he would the tortoise.
- 3.—I hope he will be acquitted of this convinced of his innocence.
- 4.—The Niagara Falls are considered wonders of the world.

- 5.—The sun had set and the long and desperate combat was not yet decided..
- 6.—A certain French king is said to have died of hunger for fear that he might be poisoned.
- 7.—He said that of us! I should never have believed it.
- 8.—I wrote to H... ,inviting him to pass the holidays with us and to let me know by return mail.
- 9.—I asked you first as my oldest friend to assist me in this embarrassment.
- 10.—The horses, frightened by a passing train, shied and were on the point of running away.

IV.

Reiters Morgengesang(German and French Poems, p. 49.)
Re-write the thought of this poem in simple German prose. The version given must be somewhat original in diction and contain not fewer than 100 words.

FIRST YEAR.

Latin Prose Composition.

Tuesday, January 26th., 1909.—Morning, 10 to 12.

Translate into Latin :

- (1)—Part of the troops escaped, but more than ten thousand were cut to pieces.
- (2)—Has the Senate decided to reward the informers (index) with lands or money?
- (3)—All good citizens entertain the same sentiments regarding the companions of Catiline.
- (4)—Upon being asked his opinion, he replied briefly.
- (5)—Cato the Elder died at the age of eighty-five years.
- (6)—The rich (beatus) are in every state envied by the poor.
- (7)—Caesar put Labienus in charge of the tenth legion.
- (8)—The goods which Verres took from the provincials must be restored.
- (9)—Plans of that sort we regard as of very little value.
- (10)—We do not remember many things, but we have not forgotten Marius and Sulla.
- (11)—I do not pity men who have been convicted of treason.
- (12)—To rid the commonwealth of so cruel a tyrant greatly concerns us, fellow-citizens.
- (13)—He who is exempt from toil, will lack the fruits of toil.
- (14)—They seem to be influenced (impello) by love of pleasure, than which no pest is more deadly.
- (15)—He was a man of large head and keen eyes.
- (16)—Catiline was eager for a revolution at Rome, as he had lost everything.

- (17)—Caesar hurried from Aquileia, a town of the Veneti, to Marseilles (Massilia) in Gaul.
- (18)—The gods helping us, we shall complete (conficio) our toils on the 29th of January.
- (19)—Hannibal was the first to lead an army of foot and horse across the Alps (Alpes).
- (20)—Your love of us is very delightful to my brother and me.

FIRST YEAR.

Latin Authors and Roman History.

Tuesday, January 26th., 1909.—Afternoon, 2 to 4.

I.—Translate into idiomatic English:

Tametsi video, si mea voce perterritus ire in exsilium animum induxeris, quanta tempestas invidiæ nobis, si minus in praesens tempus recenti memoria scelerum tuorum, at in posteritatem impendeat. Sed est tanti dum modo ista sit privata calamitas et a rei publicae periculis sejungatur. Sed tu ut vitiis tuis commoveare, ut legum poenas pertimescas, ut temporibus rei publicae cedas, non est postulandum. Neque enim is es, Catilina, ut te aut pudor umquam a turpitudine aut metus a pericula aut ratio a furore revocaverit. Quam ob rem, ut saepe jam dixi, proficiscere, ac, si mihi inimico, ut praedicas, tuo conflare vis invidiam, recta perge in exsilium: vix feram sermones hominum si id feceris, vix molem istius invidiæ, si in exsilium jussu consulis ieris, sustinebo. Sin autem servire meae laudi et gloriae mavis, egredere cum importuna scelerratorum manu, confer te ad Manlium, concita perditos cives, secerne te à bonis, infer patriae bellum, exsulta impio latrocinio, ut a me non ejectus ad alienos, sed invitatus ad tuos isse videaris.

a).—Comment upon the syntax of:—impendeat, tanti, is, consulis, laudi.

II.—Translate into idiomatic English:

Tum ostendi tabellas Lentulo et quaesivi cognosceretne signum. Adnuit. 'Est vero' inquam 'notum quidem signum, imago avi tui, clarissimi viri, qui amavit unice patriam et cives suos, quae quidem te a tanto scelere etiam muta revocare debuit'. Leguntur eadem ratione ad senatum Allobrogum populumque litterae. Si quid de his

rebus dicere vellet, feci potestatem. Atque ille primo quidem negavit; post autem aliquanto, toto jam indicio exposito atque edito, surrexit, quaesivit a Gallis quid sibi esset cum iis quam ob rem domum suam venissent, itemque a Volturcio. Qui cum illi brevitur constanterque respondissent per quem ad eum quotiensque venissent, quaesissentque ab eo nihilne secum esset de fatis Sibyllinis locutus, tum ille subito scelere demens, quanta conscientiae vis esset ostendit: nam, cum id posset infitiri, repente praeter opinionem omnium confessus est. Ita eum non modo ingenium illud et dicendi exercitatio, qua semper valuit, sed etiam propter vim sceleris manifesti atque deprehensi impudentia, qua superabat omnes, improbitasque defecit.

a)—Describe briefly the form of a Roman letter.

b)—What prophecy in the Sibylline oracles had Lentulus applied to himself?

III.—Translate at sight:

(Cicero addresses the dictator Caesar after the civil war with Pompey.)

Diversae voluntates civium fuerunt distractaeque sententiae. Non enim consiliis solum et studiis, sed armis et castris dissidebamus. Erat obscuritas quaedam, erat certamen inter clarissimos duces; multi dubitabant quid optimum esset, multi quid sibi expediret, multi quid deceret, non nulli etiam quidliceret. Perfuncta res publica est hoc misero fatalique bello; vicit is qui non fortuna inflammaret odium suum, sed bonitate leniret, neque omnes, quibus iratus esset, eosdem etiam exsilio aut morte dignos judicaret. Jam omnis dissensio frata est armis, extincta aequitae victoris; restat ut omnes, qui habent aliquid non sapientiae modo, sed etiam sanitatis, unum velint, Caesarem salvum manere.

Vocabulary.

Expedi: it is of advantage. Decet: it becomes, is appropriate.

Perfungo: to finish, be done with. Lenio: to mitigate.

Restat: it remains.

IV.—Write on any two of the following :

- a)—The functions of the king, senate, assembly in the primitive Roman state.
- b)—A contrast and comparison between Kingship and Consulship.
- c)—The circumstances under which the Tribuneship was created, and the powers of that office.
- d)—The relative showing of Rome and Carthage at the opening of the Punic wars.
- e)—The relation between the wars of conquest and the growth of political violence at Rome.
- f)—Catiline as representative of extreme radicalism rather than absolute anarchy.

SECOND YEAR.

Latin Authors.

Tuesday, January 26th., 1909.—Morning, 10 to 12.

I.—Translate freely into English:—

(a)—Horace, Epistles I, 2, 46—63.

(b)—“ “ I, 14, 18—30.

(c)—“ “ I, 17, 23—32.

II.—Translate into English at sight:—

Fuit haud ignobilis Argis
qui se credebat miros audire tragoedos,
in vacuo laetus sessor plausorque theatro;
cetera qui vitae servaret munia recto
more, bonus sane vicinus, amabilis hospes,
comis in uxorem, posset qui ignoscere servis.
Hic, ubi cognatorum opibus curisque reffectus
jam redit ad sese, ‘Pol, me occidistis, amici,
non servastis’ ait ‘cui sic extorta voluptas
et demptus per vim mentis gratissimus error.’

Vocabulary:—

Argi, orum — Argos (a Greek town).

tragoedus — a tragedian.

sessor — from sedeo, I sit.

munia — duties.

comis — kindly.

demo — I remove.

III.—Comment briefly upon emphasized words or phrases:—

(a)—**Nil admirari** prope res est una, Numici,
solaque quae possit facere et servare beatum.

(b)—Cui libet, hic **fascis** dabit.

(c)—Vescere, sodes.

(d)—**Sextili mense** caminus.

(e)—Hae latebrae dulces, etiam si credis amoenae, **incolumem** tibi me praestant **Septembribus** horis.

(f)—Namque
mordacem Cynicum sic eludebat, ut aiunt.

(g)—**Rupit** larbitam **Timagenis** aemula lingua.

SECOND YEAR.

Latin Prose Composition.

Tuesday, January 26th., 1909.—Afternoon, 2 to 4.

As the siege became daily more serious and distressing, so much the more frequently did Cicero send messengers to Caesar. A part of these were caught by the enemy in the sight of our soldiers and put to death with torture. Within our camp, however, there was a Gallic slave who had fled to Cicero at the first attack and had shown the greatest loyalty to him. He was persuaded by the hope of liberty and large rewards to carry a letter to Caesar; and fastening it within a spear-(shaft) he reached Caesar in safety. For, being a Gaul, he mixed with the Gallic enemies without exciting any suspicion. On the receipt of this letter at about five o'clock, Caesar immediately sent a messenger to Marcus Crassus, whose winter-quarters were distant twenty-five miles, and bade him lead forth his legion at midnight and come to him with all speed. He sent a like order to the rest of his lieutenants, and in the meantime made every preparation to relieve Cicero.

FIRST YEAR.

Greek Grammar and Prose.

Wednesday, January 27th., 1909.—Afternoon, 2 to 4.

I.—Give the Greek nouns, with their genitive singular and gender, corresponding to the following:
victory, assembly, master, law, work, island, hope, guide, multitude, woman.

II.—Decline in combination through singular and plural the Greek words for:

a).—this false report;

b).—all the army (2nd declension noun.).

III.—(a) Give the Greek adjectives, with their comparison, corresponding to:— hostile, easy, just, true, sweet, fortunate.

(b) Form adverbs from the above and compare the adverbs thus formed.

IV.—(a) Write in Greek the following forms of the type-verb 'I loose'.

1st plur. aor. mid. indic: 3d sing. perfect act. indic:

2d sing. impf. mid. indic: 3d plur. pres. opt. middle:

3d sing. aor. act. subjunc.

(b) Write out all the infinitives of this verb, active, middle, and passive; also all the participles, giving in each instance the gender forms.

V.—Translate into Greek:

(a). The King's horsemen have broken down (—have loosed) the great bridge across (—through) this river.

(b). The punishment of such acts-of-injustice was death according to the ancient law of the city.

(c). My brother is much taller and stronger than I.

(d). The parents will gladly ransom their children with a large sum of money (—much money).

FIRST YEAR

Greek Authors.

Wednesday, January 27th., 1909.—Morning, 10 to 12.

A (Xenophon's Hellenica I).

I.—Translate into idiomatic English:

Chapter I, paragraphs 27 to 30 inclusive.

- a).—Explain briefly the syntax of the following words:
- b).—From what verbs do these forms come:
- c).—Point out the peculiarity of construction in the sentence beginning

II.—Translate into idiomatic English:

Chapter III, paragraphs 8 and 9.

- a).—Transliterate into the corresponding Latin forms:

B (Homer, Odyssey XXI).

I.—Translate freely into English:

Verses 85 to 95 inclusive.

- a).—What would be the equivalents in Attic Greek of the following words:
- b).—Explain the nature of the contest which Penelope has proposed to the suitors, and the way in which it lends itself to the vengeance of Odysseus.

II.—Translate freely into English:

Verses 207 to 220 inclusive.

- a).—What are the circumstances which have formed the prelude to this revelation?
- b).—Comment on the Greek sense for self-control and proportion as shown in this passage.
- c).—Give Attic forms equivalent to:

SECOND YEAR.

HISTORY.

Wednesday, January 27th., 1909. — Morning 10 to 12.30.

- 1.—Write a brief sketch of the Phoenicians.
- 2.—Point out the difference between the Spartan and Athenian constitutions. Sketch the struggle in Greece between these two ideas of government.
- 3.—Give briefly the main points in the struggle between the Plebeians and Patricians in Rome.
- 4.—State the conditions under which the army became a political power in Rome.
- 6.—Write briefly on the First Triumvirate.
- 7.—Trace the steps by which the Republican Constitution in Rome gradually changed to a despotic monarchy.
- 7.—Compare the religious systems of the Greeks and the Romans.
- 9.—When and how did Christianity become legalized in Rome? When did it become the only legal religion?

FIRST YEAR.

Algebra.

Friday, January 29th, 1909.—Afternoon 2 to 5.

1. Solve the following equations:

$$(a) \sqrt{x-7} = \frac{1}{\sqrt{x}+7}$$

$$(b) \begin{aligned} x^2 + xy &= 55 \\ y^2 + xy &= 63 \end{aligned}$$

2. The roots of an equation are $3 - \sqrt{2}$ and $3 + \sqrt{2}$. Form the equation.

3. (a) If $x : y = 5 : 7$ find the value of $x + y : y - x$.

(b) If $2x : 3y$ be the duplicate ratio of $2x - m : 3y - m$, shew that $m^2 = 6 \times y$.

4. (a) If x varies directly as y and inversely as z and if when $x = 14$, $y = 10$ and $z = 14$; Find z when $x = 49$ and $y = 45$.

(b) The pressure of the wind on a plane surface varies jointly as the area of the surface and the square of the velocity of the wind; the pressure on a square foot of the surface is 1 lb. when the wind is moving at the rate of 15 miles an hour; find the velocity of the wind when the pressure on a square yard is 16 lbs.

5. Find the 10th term and the sum of 12 terms of the following series:
- (a) 3, 6, 12
 - (b) 10, 7, 4
 - (c) $y^2 + 26$, $y^4 + 46$, $y^6 + 66$.
6. From 5 professors and 12 students how many committees may be selected each containing 3 professors and 5 students.
7. Prove the Binomial Theorem for a positive index.
8. Expand—
- (a) $(x+2)^5$
 - (b) $(1+x^2)^{-3}$ to four terms.
 - (c) $(1+x)^{\frac{2}{5}}$ to five terms.
9. Write down and simplify the term independent of x in the expression $\left\{2x^2 - \frac{1}{x}\right\}^{12}$
10. Find two numbers whose sum is 9 times their difference and the difference of whose squares is 81.

FIRST YEAR.

Geometry.

Friday, January 29th., 1909.—Morning, 9 to 12.

I.—ABCD is a quadrilateral whose diameters intersect in E. If A, B, C, D, are concyclic state what equalities exist depending directly on this fact.

II.—What conditions must be established before it may be stated that ;

a.—Two lines AB and CD are parallel,

b.—Two triangles ABC and DEF are equal.

c.—A regular pentagon has been circumscribed about a given circle.

III.—Describe an isosceles triangle having each of the base angles double of the third angle.

IV.—In a given circle inscribe a triangle similar to a given triangle.

V.—In any triangle show how to obtain the centres of the inscribed, escribed and circumscribed circles.

VI.—Define or explain the following terms :—submultiple, ratio, same ratio, proportion, extreme and mean ratio, homologous, similar figures reciprocally proportional.

VII.—Triangles of the same altitude are to one another as their bases.

VIII.—Similar triangles are to one another in the duplicate ratio of their homologous sides.

IX.—In the base BC of a triangle ABC any point D is taken and DE , DF , drawn parallel to AB , AC , respectively, meet the other sides at E , F ; prove the triangle ADE a mean proportional between the triangles FED and EDC .

X.—If the perpendiculars of a triangle be produced to meet the circle circumscribed about the triangle, the segments of these perpendiculars between the orthocentre (point of intersection of the perpendiculars) and the circumference are bisected by the sides of the triangle.

FIRST YEAR.

Physics.

Saturday, January 23rd, 1909.—Morning, 10 to 12.

- I.—Describe the ordinary mercury Barometer, explaining its use.
- II.—State Boyle's Law. For a given mass of gas, shew that $\frac{VP}{T}$ is constant where V, P and T are the volume, pressure and temperature respectively.
- III.—Explain the action of the ordinary pump.
- IV.—What is meant by the weight of a body?
If the same mass is found to have a different weight at two separate places what fact would you deduce? State the Law in the case.
- V.—If two forces of 40 and 30 lbs. respectively act at right angles to one another, find the magnitude of the resultant.
- VI.—State the principle of the lever.
A lever is 20 feet long with a fulcrum two feet from one end. A weight, W, at one end balances 50 lbs. at the other.
Find W, (a) when at the end nearest to the fulcrum: (b) when at the end further from the fulcrum.
- VII.—If a bucket weighing 60 lbs. is drawn up from a well by a rope wound round an axle 6 inches in diameter, what must be the length of the handle if the force required is only 10 lbs?
- VIII.—State and explain at least four properties of matter.

FIRST YEAR.—APPLIED SCIENCE

Geometry

PART I.

Thursday, January 28th., 1909.—Morning, 9 to 12.

- I.—The line joining the middle points of the non-parallel sides of a trapezium is equal to half the sum of the parallel sides.
- II.—The sum of the squares on the sides of a parallelogram is equal to the sum of the squares on the diagonals.
- III.—Given the base of a triangle and the sum of the squares on the sides, find the locus of the vertex.
- IV.—In any triangle ABC deduce the area of the triangle in terms of the sides. If the sides of a triangle are 5, 6, and 7 inches what is the length of the radius of the circumscribing circle?
- V.—Prove that the point of intersection of tangents drawn from the points of intersection of a secant with a circle is the pole of that secant with respect to the circle.
- VI.—Prove, by transversals, that the lines joining the vertices with the points of tangency of the inscribed circle of a triangle are concurrent.
- VII.—Show that every plane passing through a perpendicular to a plane is also perpendicular to that plane.
- VIII.—Prove that the areas of the sections of a pyramid made by planes parallel to the base are proportional to the squares of their distances from the vertex.

IX.—Find the volume of the frustrum of a pyramid in terms of the height and the area of the bases.

X.—The roof of a rectangular house 30' by 50' slopes down on all sides and has a ridge of length 20' parallel to the 50' length of the house. If the ridge be 12 feet above the plane of the eaves find the volume of the space between the roof and the plane of the eaves.

PART II.—Afternoon, 2 to 3.30.

XI.—Show that in a parabola if a secant PQ meets the directrix in Z, ZF is the bisector of the exterior angle between the focal distance FP, FQ.

XII.—Tangents from any point to a parabola subtend equal angles at the focus and have equal projections in the directrix ; and the triangles formed by the tangents with the focal distances are similar.

XIII.—Construct a parabola having given (a) two points in the curve and the focus ; (b) the focus, one point on the curve and a point on the directrix.

XIV.—Find the area of a parabola contained between the curve and a double ordinate whose length is 16 inches, and whose distance from the vertex is 12 inches.

XV.—A circle is described to touch two unequal intersecting circles. Find the locus of its centre.

FIRST YEAR.—APPLIED SCIENCE

Physics.

Saturday, January 23rd., 1909.—Morning, 9.30 to 12.30.

- I.—A particle moves with uniform acceleration. Its initial velocity is 7 feet per second and its velocity after 3 seconds is 13 feet per second. Find (1) the average velocity, the space passed over, and the acceleration during this time (2) the space passed over in the next 3 seconds of its motion.
- II.—Two velocities \sqrt{v} , and $\sqrt{v^2}$ are inclined to one another at an angle of 50° . Show by a diagram (a) the resultant of the two velocities (b) the change of velocity if velocity v^2 be change into v .
- III.—A mass of 100 lbs. rests without friction in a horizontal table. A constantly acting horizontal force of 20 lbs. is applied to it. Find (1) the velocity after 1 second; (2) the time required to move the mass 10 feet (3) the work done in the latter case.
- IV.—Two masses of 4 lbs each are attached by a light inextensible string passing over a frictionless pulley. A mass of 3 lbs. is attached to one and a mass of 5 lbs, to the other. The system is released and gravity ($g=32$) allowed to act freely. Find the tensions in the three strings.
- V.—A mass of 10 lbs. is supported by two flexible strings, one of which is horizontal and the other inclined to the vertical at an angle of 30° . Find the tension in each string.
- VI.—A heavy beam, 3 feet long, weighs 4 lbs., and has a weight of 3 lbs. hung at one end. If a fulcrum be 1 foot from the 3 lbs. weight, what weight must be hung at the other end to provide equilibrium.

VII.—A weight of 400 lbs. is to be raised 20 feet. A force of 50 lbs. is available which can be directed in any direction. Design a machine, to do the work, depending on the principle of (1) the inclined plane ; (2) the wheel ; axle (3) the pulley. Find the work done in each case by the applied force.

VIII.—For a given mass of gas, show that $\frac{P V}{T}$ is constant, here P, V and T, the pressure, volume and temperature respectively, vary.

IX.—Refine Specific Heat. Show how the Specific Heat of a solid may be determined.

X.—Describe a method of determining the linear expansion of a metal rod.

FIRST YEAR.— APPLIED SCIENCE

Descriptive Geometry.

Tuesday, January 26th., 1909.—Morning, 9 to 12.

- I.—Complete the projections of the lines AB, CD and ED (see diagram sheet) given.
(1) that AB is 2'' long, (2) that CD is inclined to the H. P. at 45° , (3) that EF is $1\frac{1}{2}$ '' long and inclined to the H.P. at 45° , and to the V.P. at 30°
- II.—Show the plan and elevation of a rectangle ABCD in which AB is $1\frac{1}{2}$ '' and BC is $2\frac{1}{2}$ '' long. The plane of the figure is inclined to the H.P. at 45° and the edge AB is parallel to the H.P. and at 30° to the V.P.
- III.—Show the projections of a square of 2'' side one of whose sides is at 30° to the H.P. and 40° to the V.P. and whose other side is horizontal.
- IV.—Show the plan and elevation of an angle of 55° whose apex is 2'' above the H.P. and 1'' in front of V.P. One side of the angle is parallel to the V.P. and at 45° to the H.P. and the other side is at 60° to the H.P.
- V.—The plane of a triangle ABC whose sides AB, BC and CA are 2'', $2\frac{1}{2}$ '' and 3'' respectively is inclined to the H.P. at 40° and to the V.P. at 60° . The point A is 1'' above the H.P. and $1\frac{1}{2}$ '' in front of V.P. and the line AB is horizontal. Show the plan and elevation of the triangle. Show also the plan and elevation of the circumscribing circle.
- VI.—LM and MN inclined to the X Y at 45° and 60° respectively are the vertical and horizontal traces of a plane LMN. From a point P in the plane $\frac{1}{2}$ '' from the V.P. and 1'' above the H. P. a line PQ is drawn perpendicular to the plane LMN and 2'' long. Show the projections of

this line PQ and the traces of a plane passing through Q parallel to the plane LMN.

VII.—Find the dihedral angles between the pairs of planes to the plane LMN.
shown on the diagram sheet.

VIII.—The projections of four points A, B, C and D are given in the diagram sheet. Find, making separate figures in each case,

a. The angle which the line AB makes with the plane ACD.

b. The perpendicular distance from D to the plane ACB.

c. The traces of a plane which contains the line CD and is inclined to the plane ABC at an angle of 45° .

FIRST YEAR.—APPLIED SCIENCE.

Geometrical Drawing.—Part I.

Monday, January 25th., 1909.—Morning, 9 to 12.

- I.—Draw a circle, the circumference of which shall pass through the given point A and touch the given straight line BC.
- II.—Draw a circle of $1\frac{1}{2}$ " radius to touch two circles of 1" and 3" radius respectively whose centres are $4\frac{1}{2}$ " apart.
- III.—Inscribe a square in a triangle ABC whose sides are 4", 5" and 6" long.
- IV.—Construct an octagon of 1" side.
- V.—In a circle of 2" radius inscribe a regular nine-sided figure.
- VI.—Draw a straight line which shall be equal to the arc of a circle of $1\frac{1}{2}$ " radius cut off by a $\frac{1}{2}$ " chord.
- VII.—Describe an ellipse whose major axis is 3" and whose minor axis is 2" long.
- VIII.—Draw a tangent to the given ellipse, (a) at the point A. (b) : from the point B.
- IX.—Draw the parabola whose base or double ordinate is 4" and whose corresponding axis or height is $3\frac{1}{2}$ ".
- X.—In a circle of $2\frac{1}{2}$ " radius inscribe a triangle whose angles shall be 50° , 60° , and 70° .

FIRST YEAR.—APPLIED SCIENCE

Geometrical Drawing.—Part II.

Monday, January 25th., 1909. Afternoon, 2 to 5.

II.

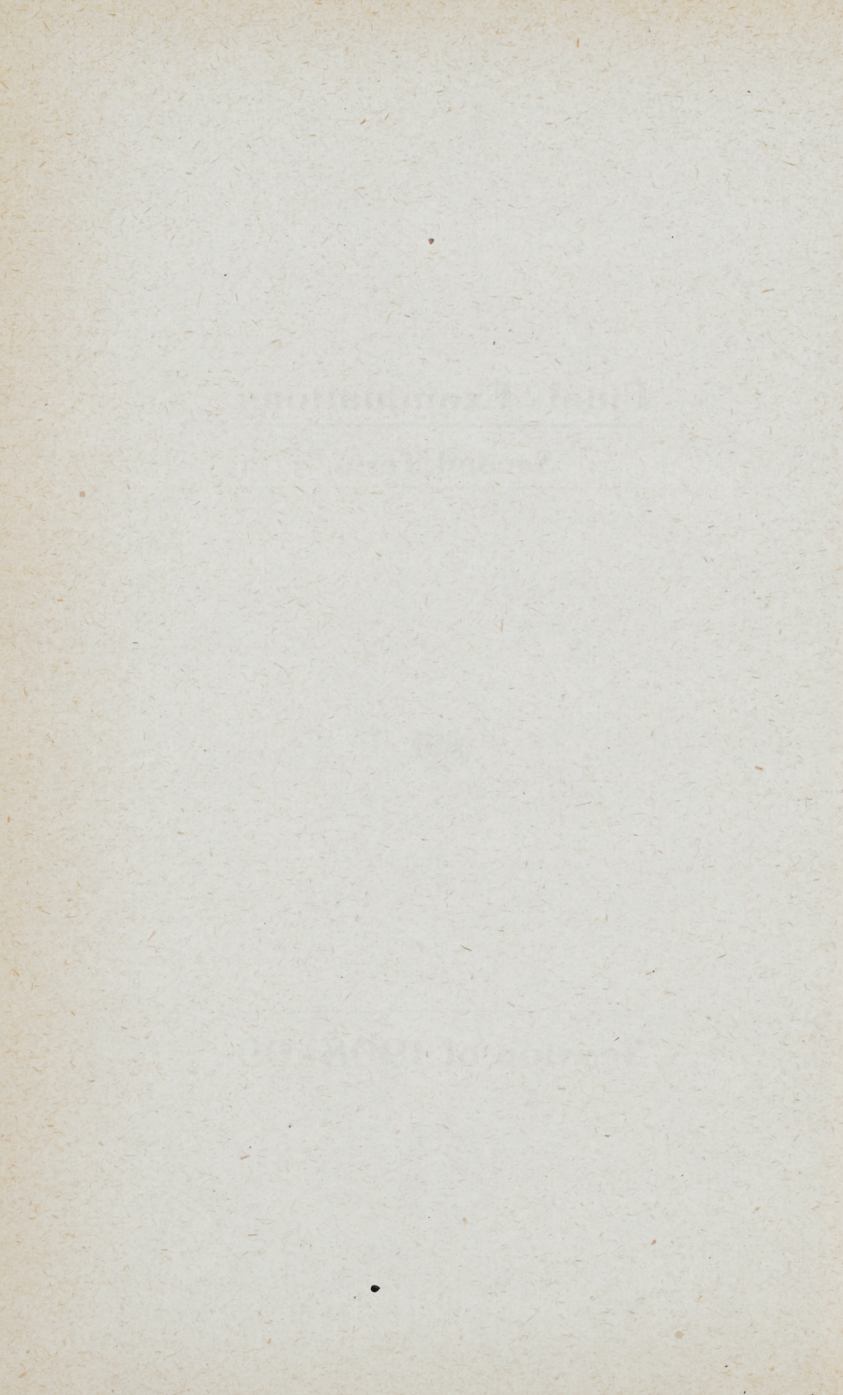
- I.—Describe one half of the involute of a circle of $2\frac{1}{2}$ " diameter.
- II.—A circle of 3" diameter makes one complete revolution along a straight line. Show the curve traced out by a point on its circumference.
- III.—A circle of 2" diameter rolls on the inside circumference of a circle of 5" diameter. Show the path traced out by a point on the circumference of the rolling circle during one complete revolution.
- IV.—A circle of $2\frac{1}{2}$ " diameter rolls on the outside circumference of a circle of 6" diameter. Show the path traced out by a point $2\frac{1}{2}$ " from the centre of the rolling circle during one half revolution.
- V.—The line AB, 2" long, is tangential to a circle of 4" diameter at the point A. If this line be now rolled along the circle until A is again tangential, trace the path of
- VI.—A system of guide lines is as follows: AB 3" long and inclined to the horizontal at 45° , BC 3" long and horizontal and the curve CDE the circumference of a semicircle whose radius is $1\frac{1}{2}$ " and whose centre is $1\frac{1}{2}$ " along a line rising at an angle of 30° . If a circle start from A and roll along the path ABCDE to E, trace the path of the point on its circumference originally in contact with A.

Final Examinations

: : Second Term : :



Session of 1908 - 09



FIRST YEAR.

English Literature. — Part I.

Wednesday, May 26th., 1909. — Morning, 10 to 12.

- I.—Write a two page theme describing the careers of Caesar and of Brutus, and contrasting their characters, as they are portrayed in Shakspeare's play, Julius Caesar. (Note that this theme will be criticised for style, spelling, and punctuation, as well as for subject-matter.)
- II.—What is a Tragedy? Describe the essential elements in the plot of a Tragedy. Illustrate these elements from Julius Caesar. Point out the faults in the structure of Julius Caesar, and suggest an explanation for the principal fault of structure.
- III.—What is meant by dramatic preparation? Dramatic blindness? Dramatic irony? Illustrate.
- IV.—What difference in style, method and subject-matter have you noticed between the plays of Shakspeare which you have read and the plays of Jonson?
- V.—Outline the plot of *The Alchemist*.
- VI.—Discuss Ben Jonson's theory of Humours, illustrating by reference to two characters from *The Alchemist* and two from *Eastward Hoe*. Describe each character minutely and in such a way as to bring out the relation of the character to Jonson's theory.
- VII.—In whose speeches in *The Alchemist* is Blank Verse most frequently used? Why? Describe this character.
- VIII.—What different ranks or grades of society are represented in *Eastward Hoe* and *The Alchemist*? Include in this list trades, businesses, professions, etc., and name a representative (from the plays) of each rank, trade, business, etc.

IX.—State clearly and as fully as you can:

- (A) The conditions in the Church of England which occasioned Milton's decision not to take orders.
- (B) The incident which wrought England to the pitch of civil war, and brought Milton back to England.

FIRST YEAR.

English Literature. — Part II.

Wednesday, May 26th., 1909. — Afternoon, 2 to 4.

X.—Name one or more sources of L'Allegro-II Penseroso group; of Comus.

XI.—To what literary species does Comus belong? Lycidas? Describe the characteristics of the species, in each case.

XII.—Place and comment on each of the following quotations:

- a) "Drowsy-flighted steeds."
- b) "Him that left half-told
The story of Cambuscan bold."
- c) "Jonson's learned sock."
- d) "Tells how the drudging goblin swet
To earne his cream-bowle duly set."
- e) "Corydon and Thyrsis."
- f) "To quench the drowth of Phoebus."
- g) "Glozing courtesy."
- h) "Te hear the lark begin his flight
.....
Then to come in spite of sorrow
And at my window bid goodmorrow."
- i) "What though the field be lost?
All is not lost — the unconquerable will
And study of revenge, immortal hate,
And courage never to submit or yield."
- j) "..... From morn
To noon he fell, from noon to dewy eve."
- k) "Fame is the spur that the clear spirit doth raise
(That last infirmity of noble mind)
To scorn delights and live laborious days."

- l) “Sweet Echo.... Queen of Parly.”
- m) “But that two handed engine at the door
Stands ready to smite once and smite no more.”
- n) “Henceforth thou art the genius of the shore
In thy large recompense.”

XIII.—Describe as minutely as you can the subject matter and the imagery of the famous passage in Lycidas in which Milton denounces the clergy, and comment on this passage.

XIV.—Describe the first book of Paradise Lost.

XV.—What is the metre of Julius Caesar? Comus? Il Penseroso? Lycidas? Paradise Lost?

SECOND YEAR.

English Literature.—Part I.

Wednesday, May 26th, 1909.—Morning, 10 to 12.

I.—Milton.

- a) Upon what conception of the physical structure of the Universe does Milton base the scheme of *Paradise Lost*? Illustrate.
- b) What was Milton's professed purpose in *Paradise Lost*? In what respect does this purpose seem to have been modified by the "human interest" of the poem? Point out the connection between this matter and the problem of the central figure or "hero" of *Paradise Lost*.
- c) Write a brief account of Milton's life, bringing out in this connection Milton's life-long sense of dedication to a high ideal.

II.—Dryden.

- a) Name the various forms of literature in which Dryden distinguished himself, and name a specimen from Dryden of each form.
- b) Relate "*Absalom and Achitophel*" to the history of Dryden's time, and identify the principal characters.

III.—The Drama.

- a) Name the author of each of the following plays, briefly describe the play, and explain its importance in the history of the drama: a) "*The Siege of Rhodes*"; b) "*The Conscious Lovers*"; c) "*George Barnwell*"; d) "*The Good Natured Man*"; e) "*The Rivals*".

IV.—The Novel.

- a) What are the essential distinctions between a Novel and a Drama?

b) What connection have the following with the development of the Novel in England:

- 1) The “Character”
- 2) The Periodical Essay?
- 3) The Elizabethan Romance?
- 4) The “Lazarillo de Tormes” type?

SECOND YEAR.

English Literature.—Part II.

Wednesday, May 26th, 1909.—Afternoon, 2 to 4.

V.—The Novel (con.)

State briefly the special significance of each of the following in the history of Eighteenth century Fiction: a) Defoe's "Robinson Crusoe," b) Defoe's "Moll Flanders"; c) Richardson's "Clarissa Harlowe"; d) Fielding's "Tom Jones."

VI.—The Novel (con.)

Give a very brief outline of the plot of some novel which you have read in connection with this course, and select two of the characters for careful and critical comment.

VII.—Poetry.

Give the most salient characteristics of a) The Neo-Classical period, b) The Romantic Revival, and exemplify these characteristics by a discussion of one poet from the former and two poets from the latter period. (Omit biographical details, and confine your answer to such poems as serve for typical illustration).

VIII.—Poetry (con.)

In connection with the development of Romanticism, suggest a reason for each of the following groupings: a) Richardson—Rousseau—Wordsworth; b) Bishop Percy — Coleridge—Wordsworth; c) Rousseau—Byron.

IX.—Poetry (con.)

Briefly contrast Browning and Tennyson in respect to: a) Attitude toward poetic art: b) Mood; c) Choice of subject-matter.

ENGLISH III.

Tennyson (Idylls and In Memoriam)—Part I.

Saturday, May 22nd, 1909.—Morning, 10 to 12.

- I.—Outline the evolution of the Arthurian material, naming the most important treatments of the theme prior to Tennyson.
- II.—Discuss the evidence of Tennyson's early interest in the subject, describing minutely his poems on this theme written prior to the Idylls.
- III.—What is the unifying principle or central theme of the Idylls? Point out as minutely as you can the development of this central theme through the series of Idylls.
- IV.—Select one Idyll for special discussion in respect to (a) Sources, (b) Literary qualities and general significance.

ENGLISH III.

Tennyson (Idylls and In Memoriam)—Part II.

Saturday, May 22nd., 1909.—Afternoon, 2 to 4.

- V.—Discuss the history of the metre of *In Memoriam* prior to Tennyson.
- VI.—State briefly (a) the special circumstances which occasioned the writing of *In Memoriam*, and (b) the particular advances in scientific thought which most influenced the mood of the poem.
- VII.—Comment fully on the following passages, or subjects:
- a) Sections II-III and XXXIX (i. e., the two apostrophes to the Yew-tree).
 - b) The successive Christmasses as typical of the changing mood.
 - c) The Resurrection of Lazarus as an argument for Immortality.
 - d) “How fares it with the happy dead?
For here the man is more and more;
But he forgets the days before
God shut the doorways of his head.” (with its immediate context.)
 - e) “‘So careful of the type?’ but no.
From scarpèd cliff and quarried stone
She cries, ‘A thousand types are gone;
I care for nothing, all shall go,’” (with its immediate context)
 - f) “..... They say,
The solid earth whereon we tread
In tracts of fluent heat began,
And grew to seeming-random forms,
The seeming prey of cyclic storms,
Till at the last arose the man.”

- g) “ And all is well tho’ faith and form
Be sunder’d in the night of fear—”
- h) “ Thou wilt not leave us in the dust:
Thou madest man, he knows not why,
He thinks he was not made to die;
And thou hast made him: thou art just.”

FIRST YEAR.

FRENCH.

Dictation, Grammar and Composition.

Saturday, May 22nd., 1909. — Morning, 10 to 12.

I.—Dictation:—

Le Bourgeois Gentilhomme (ed. Warren): page 52, line 22 to page 53, line 28.

II.—Grammar:—

1.) What are the guiding principles for the agreement of the past participle in French? Show how these are applied in the translation of the following: a). She was mistaken. b). She bought herself a dress. c). The songs I heard her sing. d). The songs I heard sung. e) The houses he has had built.

2). State the chief uses of the pleonastic *ne*. Give a French example of each.

3). Give French sentences to show the various ways in which each of the following verbs governs noun and pronoun objects: *jouer, jouir, demander, penser, manquer*.

4). Illustrate fully the uses of *rien, tout, tel, quelque*.

III.—Write in French:—

1). It is not known whether the ship was wrecked or not.

2). What a beautiful picture! Did you ever see anything like it?

3). We did not see a living soul in the street when we rose that morning.

4). There is nothing which does not please me better than that.

5). Boys, you have stolen my apples. We tell you we have not. But I say yes, for I saw you.

6). Any line being given, draw a straight line which shall be equal to it.

7). I perceived their dejection as soon as I came in; did you? No, I did not notice it.

8). What difficulty we have had to remember what you told us!

9). If he were to say such a thing to me, I should put him out of doors.

10). Do you know where Dr B. lives? I cannot tell you. There is no one here who knows.

IV.—Translate into French:—

After spending four days at Lyons, Napoleon passed successively through Macon, Auxerre and Fontainebleau. It was at Auxerre that he received Marshal Ney with open arms, calling him "the bravest of the brave." On the evening of the 20th. of March he arrived at Paris and entered the Tuileries, where he told the crowd of courtiers and generals, assembled there to welcome him, that he owed everything to the army. He then began to examine his position. What was he going to do? Make every effort for peace, or begin war at once? He ended by deciding in favour of peace, while at the same time he quietly prepared for war. This was a more difficult task than he expected, for all military material, guns, powder, cannons, seemed to have disappeared. But thanks to the Emperor's energy, the workshops and foundries did marvels. In a very short time six armies were equipped, and a seventh, called the army of reserve, assembled at Paris and Lyons to fortify those towns. Meanwhile the allied powers had sent four immense armies against France. Thousands of men from England were hastening by forced marches towards the banks of the Rhine. Having reviewed his troops on the Champ de Mars and sworn an oath of fidelity to the constitution, Napoleon opened the campaign. He left Paris on the 12th. of June and established his headquarters at Beaumont, with the Sambre before him and the Meuse on his right.

FIRST YEAR.

FRENCH.

Translation.

Saturday, May 22nd., 1909. — Afternoon, 1.30 to 3.30.

I.—Translate into English:—

Ça va bien... Tout s'est bien passé... Quelle leçon, Mathis, quelle leçon!... un rien, et le juif revenait sur l'eau, tout s'en allait au diable... Autant dire qu'on te menait pendre! (Il réfléchit; puis, avec indignation.) Je ne sais pas où l'on a quelquefois la tête! Ne faut-il pas être fou? Un marchand de graines qui entre en vous souhaitant le bonsoir... comme si les juifs polonais qui vendent de la graine, ne se ressemblaient pas tous! (Il hausse les épaules de pitié, puis se calme tout à coup.) Quand je crierais jusqu'à la fin des siècles, ça ne changerait rien à la chose... Heureusement, les gens sont si bêtes! (Il arrange le feu.) C'est pourtant ce Parisien qui est cause de tout... ça m'avait tracassé... Le gueux voulait aussi m'endormir... mais j'ai pensé tout de suite! Halte!... halte!... Prends garde, Mathis... cette manière d'endormir le monde est une invention du diable... tu pourrais raconter des histoires... (Souriant.) Il faut être fin... il ne faut pas mettre le cou dans la bricole... (Il rit d'un air goguenard.) Tu mourras vieux, Mathis, et le plus honnête homme du pays; tu verras tes enfants et tes petits-enfants dans la joie, et l'on mettra sur ta tombe une belle pierre, avec des inscriptions en lettres d'or du haut en bas. (Silence.) Allons, allons, tout s'est bien passé!... Seulement, puisque tu rêves, et que Catherine bavarde comme une pie devant le médecin, tu coucheras là-haut, la clef dans ta poche; les murs t'écouteront s'ils veulent. (Il se lève.) Et maintenant, nous compter les écus du gendre... pour que le gendre nous aime... (Il rit.) Pour qu'il soutienne le beau-père, si le beau-père disait des bêtises après avoir bu un coup de trop... Hé! hé! hé! c'est un finaud,

Christian, ce n'est pas un Kelz à moitié sourd et aveugle, qui dressait des procès-verbaux d'une aune, et rien^o dedans; non, il serait bien capable de mettre le nez sur une bonne piste. La première fois que je l'ai vu, je me suis dit:—Toi, tu seras mon gendre... et si le Polonais fait mine de ressusciter, tu le repousserais dans l'autre monde!

II.—Translate into English:—

M. Jourdain.—Qui est donc tout ce monde-là, s'il vous plaît?

Mme Jourdain.—Tout ce monde-là est un monde qui a raison, et qui est plus sage que vous. Pour moi, je suis scandalisée de la vie que vous menez. Je ne sais plus ce que c'est que notre maison. On dirait qu'il est céans carême-prenant tous les jours, et dès le matin, de peur d'y manquer, on y entend des vacarmes de violons et de chanteurs dont tout le voisinage se trouve incommodé.

Nicole.—Madame parle bien. Je ne saurais plus voir mon ménage propre avec cet attirail de gens que vous faites venir chez vous. Ils ont des pieds qui vont chercher de la boue dans tous les quartiers de la ville pour l'apporter ici; et la pauvre Françoise est presque sur les dents à frotter les planchers que vos biaux maîtres viennent crotter régulièrement tous les jours.

M. Jourdain.—Ouais! notre servante Nicole, vous avez le caquet bien affilé pour une paysanne.

Mme Jourdain.—Nicole a raison, et son sens est meilleur que le vôtre. Je voudrais bien savoir ce que vous pensez faire d'un maître à danser à l'âge que vous avez.

Nicole.—Et d'un grand maître tireur d'armes qui vient avec ses battements de pied, ébranler toute la maison et nous déraciner tous les carriaux de notre salle.

M. Jourdain.—Taisez-vous, ma servante et ma femme.

Mme Jourdain.—Est-ce que vous voulez apprendre à danser, pour quand vous n'aurez plus de jambes?

Nicole.—Est-ce que vous avez envie de tuer quelqu'un?

M. Jourdain.—Taisez-vous, vous dis-je, vous êtes des ignorantes l'une et l'autre, et vous ne savez pas les prérogatives de tout cela.

Mme Jourdain.—Vous devriez plutôt songer à marier votre fille, qui est en âge d'être pourvue.

M. Jourdain.—Je songerai à marier ma fille, quand il se présentera un parti pour elle; mais je veux songer aussi à apprendre les belles choses.

Nicole.—J'ai encore ouï dire, madame, qu'il a pris aujourd'hui, pour renfort de potage, un maître de philosophie.

M. Jourdain.—Fort bien. Je veux avoir de l'esprit et savoir raisonner des choses parmi les honnêtes gens.

Mme Jourdain.—N'irez-vous point l'un de ces jours au collège vous faire donner le fouet, à votre âge?

M. Jourdain.—Pourquoi non? Plût à Dieu l'avoir tout à l'heure, le fouet, devant tout le monde, et savoir ce qu'on apprend au collège!

Nicole.—Oui, ma foi, cela vous rendrait la jambe bien mieux faite.

M. Jourdain.—Sans doute.

III.—In his narrative of Louis XVI and Marie Antoinette from the fall of the Bastille on, what impressions does Lamartine evidently wish to leave a) as to their treatment by the revolutionary tribunals, b) as to their personal traits of character? Illustrate from the account.

IV.—Translate into English:—

Le génie de Molière est désormais un des ornements et des titres du génie même de l'humanité. La Rochefoucauld, en son style ingénieux, a dit que l'absence éteint les petites passions et accroît les grandes, comme un vent violent qui souffle les chandelles et allume les incendies; on en peut dire autant de l'absence, de l'éloignement, et de la violence des siècles, par rapport aux gloires. Les petites s'y abîment, les grandes s'y achèvent et s'en augmentent. Mais parmi les grandes gloires elles-mêmes, qui durent et survivent, il en est beaucoup qui ne se maintiennent que de loin, pour ainsi dire, et dont le nom reste mieux que les oeuvres dans la mémoire des hommes. Molière, lui, est du petit nombre toujours présent, au profit de qui se font et se feront toutes les conquêtes possibles de la civilisation nouvelle. Plus cette mer d'oubli du passé s'étend derrière et se grossit de tant de débris, plus aussi elle

porte ces mortels fortunés et les exhausse; un flot éternel les ramène tout d'abord au rivage des générations qui recommencent. Les réputations, les génies futurs, les livres, peuvent se multiplier, les civilisations peuvent se transformer dans l'avenir, pourvu qu'elles se continuent; il y a cinq ou six grands oeuvres qui sont entrés dans le fond inaliénable de la pensée humaine. Chaque homme de plus qui sait lire est un lecteur de plus pour Molière.

V.—Answer only one of the following questions in French.
Your answer should contain about 100 words.

- 1). Pourquoi a-t-on appelé un certain hiver “l'hiver du polonais”? Rédigez l'histoire telle que Walter l'a racontée.
- 2). Pourquoi M. Mathis est-il venu au monde sous une bonne étoile?
- 3). Décrivez la signature du contrat. Pourquoi M. Mathis a-t-il choisi Christian comme gendre?
- 4). M. Mathis fut enfin accusé et condamné, n'est-ce pas?

FRENCH.

Part 1.

I.—Dictation :—

II.—Translate into English:

a). Arsinoé

Je viens, par un avis qui touche votre honneur,
Témoigner l'amitié que pour vous a mon coeur.
Hier j'étais chez des gens de vertu singulière,
Où sur vous du discours on tourna la matière;
Et là, votre conduite, avec ses grands éclats,
Madame, eut le malheur qu'on ne la loua pas.
Cette foule de gens dont vous souffrez visitez,
Votre galanterie, et les bruits qu'elle excite,
Trouvèrent des censeurs plus qu'il n'aurait fallu,
Et bien plus rigoureux que je n'eusse voulu.
Vous pouvez bien penser quel parti je sus prendre;
Je fis ce que je pus pour vous pouvoir défendre;
Je vous excusai fort sur votre intention,
Et voulus de votre âme être la caution.
Mais vous savez qu'il est des choses dans la vie
Qu'on ne peut excuser, quoiqu'on en ait envie;
Et je me vis contrainte à demeurer d'accord
Que l'air dont vous vivez vous faisait un peu tort;
Qu'il prenait dans le monde une méchante face;
Qu'il n'est conte fâcheux que partout on n'en fasse;
Et que, si vous vouliez, tous vos déportements
Pourraient moins donner prise aux mauvais jugements.

Non que j'y croie au fond l'honnêteté blessée ;
Me préserve le ciel d'en avoir la pensée !
Mais aux ombres du crime on prête aisément foi,
Et ce n'est pas assez de bien vivre pour soi.

b)

Alceste

Lui ! de semblables tours il ne craint point l'éclat :
Il a permission d'être franc scélérat ;
Et, loin qu'à son crédit nuise cette aventure,
On l'en verra demain en meilleure posture.

Philinte

Enfin, il est constant qu'on n'a point trop donné
Au bruit que contre vous sa malice a tourné ;
De ce côté déjà vous n'avez rien à craindre :
Et pour votre procès, dont vous pouvez vous plaindre,
Il vous est en justice aisé d'y revenir,
Et contre cet arrêt.....

Alceste

Non, je veux m'y tenir.
Quelque sensible tort qu'un tel arrêt me fasse,
Je me garderai bien de vouloir qu'on le casse.
On y voit trop à plein le bon droit maltraité,
Et je veux qu'il demeure à la postérité,
Comme une marque insigne, un fameux témoignage
De la méchanceté des hommes de notre âge.

III.—Translate into English:—

Les Souvenirs du Peuple

On parlera de sa gloire
Sous le chaume bien longtemps,
L'humble toit, dans cinquante ans
Ne connaîtra plus d'autre histoire.
Là viendront les villageois
Dire alors à quelque vieille :
Par des récits d'autrefois,
Mère, abrégez notre veille.
Bien, dit-on, qu'il nous ait nui,
Le peuple encore le révère,

Oui, le révère.
Parlez-nous de lui, grand'mère,
Parlez-nous de lui.

.....

Mais, quand la pauvre Champagne
Fut en proie aux étrangers,
Lui, bravant tous les dangers,
Semblait seul tenir la campagne.
Un soir, tout comme aujourd'hui,
J'entends frapper à la porte;
J'ouvre. Bon Dieu! c'était lui,
Suivi d'une faible escorte.
Il s'assoit où me voilà,
S'écriant: Oh! quelle guerre!
Oh! quelle guerre!
...Il s'est assis là, grand'mère!
Il s'est assis là!

J'ai faim, dit-il; et bien vite
Je sers piquette et pain bis;
Puis il sèche ses habits,
Même à dormir le feu invite.
Au réveil, voyant mes pleurs,
Il me dit: Bonne espérance!
Je cours de tous ses malheurs
Sous Paris venger la France.
Il part; et, comme un trésor,
J'ai depuis gardé son verre,
Gardé son verre,
...Vous l'avez encor, grand'mère!
Vous l'avez encor!

Le voici. Mais à sa perte
Le héros fut entraîné.
Lui, qu'un pape a couronné,
Est mort dans une île déserte.
Longtemps aucun ne l'a cru;
On disait: il va paraître.
Par mer il est accouru;
L'étranger va voir son maître.
Quand d'erreur on nous tira,
Ma douleur fut bien amère!

Fut bien amère!
...Dieu vous bénira, grand'mère,
Dieu vous bénira.

—Béranger.

Add a few remarks about the work of Béranger.

IV.—Outline the plot of Corneille's *Cinna*. Point out contrasts and resemblances to the *Cid*.

V.—Translate into French:—

a). The bee is not the greatest benefactor of man. Has man a greater?—The sheep does not give him honey, but the bee does not give him wool.—The sheep has no sting, but the bee has one.—Honey is pleasant, but the sting is not.—Do you want any more reasons?—Why, no, I don't want any more; they are not absolutely necessary.

b). A beech and an oak were growing together. The beech went up to a great height. From top to bottom, its branches were enormous. They spread so that they covered the ground all about. Under this tree the ground was bare. Not a single blade of grass could grow there. However, an oak had started up from the foot of this tall beech. It had come up a few feet, then, after bending and twisting, after extending horizontally, it had straightened itself up once more.

c). King Louis the Fourteenth of France was very haughty. He demanded that everybody should be not merely punctual but beforehand. He rarely missed an appointment when he had made one, but he wanted people to arrive before him. One day, he had ordered his carriages for a certain hour. They arrived exactly at the hour; but the king was not pleased and said, as he looked at his watch, "I came near having to wait." These words indicate to us his disposition, which was most imperious.

SECOND YEAR.

FRENCH.

Part II.

Tuesday, May 25th., 1909.—Afternoon, 1.30 to 3.30.

I.—Translate into English:—

Chimène

Puisque vous refusez la justice à mes larmes,
Sire, permettez-moi de recourir aux armes;
C'est par là seulement qu'il a su m'outrager,
Et c'est aussi par là que je me dois venger.
A tous vos cavaliers je demande sa tête:
Oui, qu'un d'eux me l'apporte, et je suis sa conquête;
Qu'ils le combattent, Sire; et le combat fini,
J'épouse le vainqueur, si Rodrigue est puni.
Sous votre autorité souffrez qu'on le publie.

Don Fernand

Cette vieille coutume en ces lieux établie,
Sous couleur de punir un injuste attentat,
Des meilleurs combattants affaiblit un Etat;
Souvent de cet abus le succès déplorable
Opprime l'innocent, et soutient le coupable.
J'en dispense Rodrigue: il m'est trop précieux
Pour l'exposer aux coups d'un sort capricieux:
Et quoi qu'ait pu commettre un coeur si magnanime,
Les Mores en fuyant ont emporté son crime.

Don Diègue

Quoi! Sire, pour lui seul vous renversez des lois
Qu'a vu toute la cour observer tant de fois!
Que croira votre peuple, et que dira l'envie,

Si sous votre défense il ménage sa vie,
Et s'en fait un prétexte à ne paraître pas
Où tous les gens d'honneur cherchent un beau trépas?
De pareilles faveurs terniraient trop sa gloire:
Qu'il goûte sans rougir les fruits de sa victoire.
Le Comte eut l'audace; il l'en a su punir:
Il l'a fait en brave homme, et le doit maintenir.

Don Fernand

Puisque vous le voulez, j'accorde qu'il fasse;
Mais d'un guerrier vaincu mille prendraient la place.
Et le prix que Chimène au vainqueur a promis
De tous mes cavaliers ferait ses ennemis.
L'opposer seul à tous serait trop d'injustice:
Il suffit qu'une fois il entre dans la lice.
Choisis qui tu voudras, Chimène, et choisis bien;
Mais après ce combat ne demande plus rien.

Don Diègue

N'excusez point par là ceux que son bras étonne:
Laissez un champ ouvert, où n'entrera personne.
Après ce que Rodrigue a fait voir aujourd'hui,
Quel courage assez vain s'oserait prendre à lui?
Qui se hasarderait contre un tel adversaire?
Qui serait ce vaillant, ou bien ce téméraire?

Don Sanche

Faites ouvrir le champ: vous voyez l'assaillant;
Je suis ce téméraire, ou plutôt ce vaillant.

II.—

a). Sketch the distinguishing characteristics of the Classical and the Romantic Schools as regards French literature.

b). Describe the foundation and the aims of the French Academy.

c).—What influence did the salons have on the French literature of the seventeenth century? Illustrate by a sketch of the most important one.

d). Mention Molière's greatest and most characteristic works. Add a few discriminating remarks.

e). Outline the life and work of George Sand.

III.—Translate into English:—

Les jugements de la postérité, sont quelques fois bizarres. Aussi longtemps que l'on jouera *Les Précieuses Ridicules*, c'est-à-dire aussi longtemps que durera la langue française, aussi longtemps on se moquera des précieuses, vraies ou fausses, ridicules ou non, de l'hôtel de Rambouillet, de l'incomparable *Arthénice* et de *Madeleine de Soudéry*. Ce sont elles pourtant, il faut bien le reconnaître, à qui l'esprit français est redevable de quelques-unes des meilleures leçons qu'il ait jamais reçues, et notre littérature elle-même, par une conséquence que je vais dire, de toute une part de sa gloire. Molière, en se moquant d'elles et, pour s'en mieux moquer, en outrant leurs ridicules, a fait son métier d'auteur dramatique, mais nous, il serait temps de faire enfin le nôtre en ne recevant pas une satire pour l'expression durable du jugement de l'histoire. En réalité donc, les précieuses ne nous eussent-elles appris que la décence du langage, et qu'à ne pas nommer en toute occasion ni devant tout le monde toutes les choses par leur nom, ce serait déjà beaucoup; et Molière lui-même, oui, Molière, sans danger pour sa gloire, eût pu plus d'une fois se mettre à leur école. L'art ne peut pas, ne doit pas exprimer tout ce qui forme, en quelque sorte, la matière quotidienne, l'étoffe commune et grossière de la vie, ou du moins il ne le peut qu'en le transportant; et cette formule, qui est devenue celle de la conversation des honnêtes gens, est en même temps aussi le commencement de l'art d'écrire.

Ce qu'il faut reprocher aux précieuses, c'est, en constituant le langage des honnêtes gens, et pour le constituer, d'avoir aggravé la différence qui sépare partout la langue littéraire de la langue populaire. Nous n'avons pas en France, on le sait, de littérature populaire; la faute en est pour une part aux précieuses. Ce n'est pas qu'elles y aient tâché, ce n'est pas qu'elles l'aient voulu, ce n'est pas même en un certain sens qu'elles aient rien fait pour cela. Mais elles ont ignoré l'existence de trop de choses en dehors d'elles; elles n'ont pas assez

connu le monde ni la vie, mais seulement les salons et la cour, avec cela quelques gens de lettres; leur expérience a manqué d'étendue et de diversité. Jaloux du suffrage des salons, les gens de lettres à leur tour, voulant avoir, comme on dit, les femmes avec eux, ont insensiblement limité le champ de leur observation, diminué leurs moyens d'expression, raffiné, naturellement, sur le petit nombre qu'ils en conservaient. Aussi, dans aucune littérature, peut-être, le style écrit ne diffère-t-il autant du style parlé que dans la nôtre; et dans aucune enfin les meilleurs écrivains eux-mêmes,—j'entends surtout les prosateurs,—n'ont vraiment moins de lecteurs chez eux qui les goûtent, mais, par compensation, plus d'admirateurs à l'étranger.

IV.—Answer one only of the following in French. You should write about 150 words.

a). Donner un épitomé de n'importe laquelle des fables de La Fontaine, accompagné de quelques remarques sur l'auteur.

b). Ecrire une esquisse de la vie d'Alfred de Musset. Citer un de ses poèmes.

SECOND YEAR.

GERMAN, FIRST PAPER.

Friday, May 21st., 1909.—Morning, 10 to 12.

I.—Dictation:—

Lessing's Hamburgische Dramaturgie in Keller, pages 87-88.

II.—Translate into English:—

Im Jahre 1506 war in Rom in dem Palaste des Kaisers Titus eine Marmorstatue, welche zu den schönsten griechischen Kunstwerken des Alterthums gehört, entdeckt und im Vatikan aufgestellt worden. Dieselbe stellt den trojanischen Priester Laokoon dar, wie er mit seinen beiden Söhnen von zwei ungeheuren Schlangen auf Poseidon's Befehl ermordet wird, weil er die Trojaner vor dem hölzernen Pferde der Griechen gewarnt hatte. Diese Marmorgruppe hatte Winkelmann mit der Erzählung des Dichters Vergil in der Aeneide verglichen und rühmend hervorgehoben, daß in der Marmorgruppe der von Schlangen umwundene Priester „kein schreckliches Geschrei erhebe, wie Vergil von seinem Laokoon“ erzählt, sondern nur seufze und sich dadurch als ein Held zeige, welcher die fürchterlichsten Schmerzen mit Seelenstärke ertrage.

Gegen diese Ansicht wendet sich Lessing in seinem Laokoon. Er bestreitet, daß in dem Unterdrücken des Schmerzeschreies sich eine starke Seele offenbare; die Helden aller griechischen Dichtungen hätten geschrien. Der Bildhauer aber mußte das Schreien des Laokoons in Seufzen mildern, weil das Schreien das Gesicht entstelle. Der bildende Künstler kann nur einen einzigen Augenblick darstellen; er muß einen solchen wählen, welcher die Einbildungskraft des Zuschauers beansprucht und dessen Schönheitsgefühl nicht verlegt. Der Dichter hingegen kann eine Reihe von Momenten vorführen; er darf das Häßliche in seine Darstellung verweben, weil er es durch das Nachfolgende so sehr mildern kann, daß es dem Schönheitsgefühl nicht widerspricht. Die Malerei, ein Teil der darstellenden Kunst, sei folglich nicht eine stumme Poesie, noch auch die Poesie eine lebende Malerei, wie Bodmer und die andern Schweizer gelehrt hatten, sondern die Gebiete der bildenden Kunst und der Poesie sind voneinander streng geschieden. Die bildende Kunst stellt Körper mit ihren Eigenschaften, die Poesie hingegen Handlungen dar. Wenn die Poesie Körper schildert, kann sie es nur andeutungsweise durch fortschreitende Handlungen tun. Darum beschreibt Homer den Schild des Achilleus nicht im fertigen, sondern im werdenden Zustande.

So stellte Lessing die Grenzen der Künste fest und beseitigte die bis dahin bestehenden unklaren Ansichten über dieselben³.

III.—Translate into German:—

Frederick Barbarossa

The kingdom of Jerusalem had been destroyed by Saladin.

and Jerusalem itself had again fallen into the hands of the infidels. The intelligence of these events awakened in Europe new enthusiasm to go out to the reconquest of the holy city. Emperor Frederick Barbarossa also determined upon a crusade.

After he had provided for the peace of the empire and, through ambassadors, had assured himself of the co-operation of the king of Hungary, the emperor of Greece, and the sultan of Iconium, he set out in May 1189 with an army of 50,000 horsemen and as many foot-soldiers. After many battles with the Bulgarians and the faithless Greeks, he reached Adrianople, where he wintered. He crossed over to Asia in Greek ships, and after numberless battles came before Iconium.

For several days he here fought against the Turks, who numbered 200,000 men. When many of the Christians were falling back, the emperor cried: "Why do you delay, you who have come out to buy the Kingdom of heaven with your blood? Christ commands, Christ triumphs." With these words he dashed on against the enemy. The Saracens fell back, and at the same time the Christian banners waved from the walls of Iconium. The emperor's son Frederick had stormed the city during the battle.

The army then came to Seleucia on the river Calycadnus. There the narrow bridge delayed the passage of the army very much. The emperor became impatient and rode into the raging flood. But its might was greater than his courage. While struggling with its waters, he was stricken with apoplexy and sank.

For years many expected his return. Later there arose the legend that the emperor was sitting asleep in a grotto of the Kyffhäuserberg, upon which one of his castles stood, and that his flaming beard had grown through the stone table at which he sat. There, it is said, he will remain till the ravens, frightened away by the eagle, no longer circle about the mountain.

IV.—Translate into English:—

Egmont ist eine poetische Erscheinung. Er lebt leicht weg und gewinnt alle Herzen. Seine dämonische Liebenswürdigkeit entzückt das Volk, umstrickt ein einfaches Mädchen wie Clärchen, gewinnt die Regentin und bezwingt den Sohn seines erbitterten Feindes. Aber in der Person Alba's naht das Verderben; und Egmont geht daran zu Grunde, daß er sich dem poetischen Leichtsinne seiner Natur überläßt und die Ratschläge der Klugheit verachtet. Bis zuletzt hofft er; und da ihm jede Hoffnung für das eigene Leben abgeschnitten ist, hofft er für sein Volk. Er trägt

ein ideales Bild desselben im Herzen, welches mit der Wirklichkeit, die wir vor uns sehen, nicht übereinstimmt; aber diese scheuen Bürger von Brüssel, die sich vor Albas Soldaten bei Seite drücken, sind nicht das niederländische Volk. Auch Clärchen gehört dazu, die ihr Schicksal mit dem seinigen für immer verknüpft, den ganzen Enthusiasmus ihrer Natur an seine Befreiung setzt, auf den Straßen die Menge zu erregen sucht und, da Alles vergeblich ist, dem Geliebten im Tode vorangeht. Im Traum erscheint die Freiheit tröstend dem sterbenden Helden und trägt Clärchens Züge. Getröstet entläßt uns der Dichter, und die strenge Tragik eines unerbittlichen Schicksals mag er sogar durch die Gewalt der Töne lindern.

Das Stück war im Namen der Freiheit entworfen, wie der Götz. Aber indem es spanische Gewaltthätigkeit gegenüber dem niederländischen Recht, spanische Unduldsamkeit gegenüber dem Protestantismus, spanische Hinterlist gegenüber einem offenen, vertrauenden Helden zum Ziele des Angriffs machte, schwang es sich über die specifisch nationalen Interessen hinaus auf einen mehr welthistorischen Standpunkt. Die Verführbarkeit und Furchtbarkeit der Masse, die an Shakespeare's Volk im „Cäsar“ erinnert, zeigt, daß Goethe auch in seiner Jugend die Freiheit nicht als Vielherrschaft verstand.

SECOND YEAR.

GERMAN, SECOND PAPER.

Friday, May 21st., 1909.—Afternoon, 1.30 to 3.30.

I.—Translate into English:—

Egmont. — Und ist der gute Wille eines Volkes nicht das sicherste, das edelste Pfand? Bei Gott! Wann darf sich ein König sicherer halten, als wenn sie alle für einen, einer für alle steh'n? Sicherer gegen innere und äußere Feinde?

Alba. — Wir werden uns doch nicht überreden sollen, daß es jetzt hier so steht?

Egmont. — Der König schreibe einen General-Pardon aus, er beruhige die Gemüter; und bald wird man sehen, wie Treue und Liebe mit dem Zutrauen wieder zurückkehrt.

Alba. — Und jeder, der die Majestät des Königs, der das Heiligtum der Religion geschändet, ginge frei und ledig hin und wieder! Lebte den andern zum bereiten Beispiel, daß ungeheure Verbrechen straflos sind!

Egmont. — Und ist ein Verbrechen des Unsinns, der Trunkenheit nicht eher zu entschuldigen, als grausam zu bestrafen? Besonders, wo sichere Hoffnung, wo Gewißheit ist, daß die Uebel nicht wiederkehren werden? Waren Könige darum nicht sicherer? Werden sie nicht von Welt und Nachwelt gepriesen, die eine Beleidigung ihrer Würde vergeben, bedauern, verachten konnten? Werden sie nicht eben deswegen Gott gleich gehalten, der viel zu groß ist, als daß an ihn jede Lästerung reichen sollte?

Alba. — Und eben darum soll der König für die Würde Gottes und der Religion, wir sollen für das Ansehen des Königs streiten. Was der Obere abzu-
lehnen verschmäht, ist unsere Pflicht zu rächen. Ungestraft soll, wenn ich rate, kein Schuldiger sich freuen.

Egmont. — Glaubst du, daß du sie alle erreichen wirst? Hört man nicht täglich, daß die Furcht sie hie und dahin, sie aus dem Lande treibt? Die Reichsten werden ihre Güter, sich, ihre Kinder und Freunde flüchten; der Arme wird seine nützlichen Hände dem Nachbar zubringen.

Alba. — Sie werden, wenn man sie nicht verhindern kann. Darum verlangt der König Rat und Tat von jedem Fürsten, Ernst von jedem Statthalter; nicht nur Erzählung, wie es ist, was werden könnte, wenn man alles gehen ließe, wie's geht. Einem großen Uebel zusehen, sich mit Hoffnung schmeicheln, der Zeit vertrauen, etwa einmal drein schlagen, wie im Fastnachtspiel, daß es klatscht und man doch etwas zu tun scheint, wenn man nichts tun möchte: heißt das nicht, sich verdächtig machen, als sehe man dem Aufruhr mit Vergnügen zu, den man nicht erregen, wohl aber beugen möchte?

II.—Translate into English:—

Es riß mich hinunter blitzeschnell;

Da stürzt' mir aus felsigtem Schacht
Wildflutend entgegen ein reizender Duell;
Mich packte des Doppelstroms wütende Macht,
Und wie einen Kreisel mit schwindelndem Drehen
Irtet mich's um, ich konnte nicht widerstehen.

Da zeigte mir Gott, zu dem ich rief
In der höchsten, schrecklichen Not,
Aus der Tiefe ragend ein Felsenriff;
Das ergaß ich behend und entrann dem Tod.
Und da hing auch der Becher an spitzen Korallen,
Sonst wär' er ins Bodenlose gefallen.

Denn unter mir lag's noch bergetief
In purpurner Finsternis da;
Und ob's hier dem Ohre gleich ewig schlief,
Das Auge mit Schauern hinunter sah,
Wie's von Salamandern und Molchen und Drachen
Sich regt' in dem furchtbaren Höllenrachen.

Schwarz wimmelten da, in grauem Gemisch,
Zu scheußlichen Klumpen geballt,
Der stachelige Rocher, der Klippenfisch,
Des Hammers greuliche Ungestalt,
Und dräuend wies mir die grimmigen Zähne
Der entsetzliche Hai, des Meeres Hyäne.

Und da hing ich und war's mir mit Grausen bewußt,
Von der menschlichen Hilfe so weit,
Unter Larven die einzige fühlende Brust,
Allein in der gräßlichen Einsamkeit,
Tief unter dem Schall der menschlichen Rede
Bei den Ungeheuern der traurigen Bede.

Und schauernd dacht' ich's — da froh's heran,
Regte hundert Gelenke zugleich,
Will schnappen nach mir; in des Schreckens Wahn
Laß ich los der Koralle umklammerten Zweig;
Gleich faßt mich der Strudel mit rasendem Toben;
Doch es war mir zum Heil, er riß mich nach oben.

III.—To what trilogy does *Die Piccolomini* belong? Give a general idea of its character. What parts do the *Piccolomini* play in the development of the plot?

IV.—Write about one only of the following in German. Your answer should contain about 150 words.

- a). Die Erzählung des Nibelungen Liedes (des alten Epos).
- b). Wolfram von Eschenbach's Parzival.
- c). Schiller's *Kraniche von Byfus*.
- d). Richard Wagner und seine Musikdramen.

V.—a). Distinguish the *Minnesänger* from the *Meisterfänger*. Who were the chief representatives of each? Add a few notes about these.

b) Give an account of the origin of the „neuhochdeutsche Sprache“ and of the first work written in it.

c) What is meant by the „Streit der Leipziger und Schweizer“? Enter as fully as you can into the details.

d) Sketch the life and works of Goethe. What are given as his „Hauptverdienste“?

FIRST YEAR.

Latin Authors.

Tuesday, May 25th.,—Morning 10 to 12.

1.—Translate into English:—Aeneid I, 453-463.

(a) Scan verse 458. Name the measure and explain the meaning of the name. (b) Comment on the meaning of **manus** and **operum laborem** in 455, **jam** in 459, and **sua** in 461. (c) Give an account of the Trojan legend sufficient to explain 458.

2.—Translate into English:—Aeneid II, 657-668.

(a) Scan verse 663, and explain the peculiar variation in quantity. (b) Comment on the meaning of **sperasti** and **patrio** in 658, **hoc** in 660, and **isti** in 661. (c) **Alma parens**. Who? By what process of derivation is the ancestry of Caesar traced to her in Book I?

3.—Translate into English:—Aeneid IV, 351-361.

(a) Scan 361. What name is given to such a line? State two theories advanced as to the nature of such lines.

4.—Translate at sight:—Aeneid IX, 314-323.

(Euryalus and Nisus, son of Hyrtacus, leave the Trojan camp to bear tidings to the absent Aeneas of the distress of his followers. It is necessary for them to pass through the Rutulian lines in doing so).

Suggestions:—**Inimica**: that was to prove their undoing.

Arrectos: standing upright.

Vasta dabo is equivalent to **vastabo**.

Limes: path, trail.

B

Write on any two of the following topics:—

- (1) A comparison of the legal status, history, and outcome of the First and Second Triumvirates.

- (2) The work of Augustus in laying the foundations of the Principate.
- (3) The deification of Roman Emperors.
- (4) The situation of the Provinces in the Empire as compared with that under the Republic.
- (5) Diocletian's readjustment of the Principate, — reasons and methods.
- (6) Reasons which may be considered as animating the best Roman Emperors to persecute the Christians.

FIRST YEAR.

Latin Prose Composition.

Tuesday, May 25th. — Afternoon, 2 to 4.

- 1.—Seeing that you have secured (paro) all your advantages by the laws of this commonwealth, do not despise those laws.
- 2.—He called the Senate together in the temple of Jupiter Stator that there might be more weight in his words.
- 3.—No man is so old as not to think that he can live a year.
- 4.—He affirmed that he would accuse you of treason (proditio) before the magistrates because you did not (as he maintains) resist the enemy.
- 5.—The Senate decreed that the consuls should see to it that the state suffered no hurt.
- 6.—There was no reason at all why Verres should have feared that he would not be acquitted by such judges.
- 7.—I shall with your permission (pax) enquire of this witness whether he saw the defendant (reus) in Rome on the 14th of April.
- 8.—If some god should descend from heaven to bestow (largior) such kindnesses on men, he would hardly find those worthy to receive.
- 9.—Unless he pays me the money which he owes me, I shall have to stay at home.
- 10.—Provided that there is a wall between you and me, Catiline, I shall be freed from a great dread which has long been overhanging me.

- 11.—They bitterly accused Tiberius (saying that) he was either cowardly or lazy (iners): why did he linger at Rome when sedition had broken out in Gaul?
- 12.—I do not think the magistrates will condemn you if you promise to restore the money which you wrongfully took from me.
- 13.—It is said that Cato the elder began to study Greek literature when he was now more than eighty years old.
- 14.—In the seven hundred and eighth year after the foundation of the city, the republic being overthrown, the Roman state began to be ruled by Caesars.
- 15.—The fact that you gave him an opportunity of clearing (purgo) himself greatly increased your reputation for fairness (aequitas).

SECOND YEAR.

Latin Authors.

Tuesday, May 25th.—Morning, 10 to 12.

I.—Translate into English:—

Page 20-21, paragraphs 7 to 11 inclusive.

- (a) Centum... factos.—To what arrangement does this refer? (b) Hodie quoque, etc. — Explain. (c) Quod bonum etc. — Why are these words prefixed to the command 'create'?

II.—Translate into English:—

Page 32, paragraphs 10 to 14 inclusive.

- (a) Paulo ante imperium populo Romano pepererunt.— Explain. (b) Sororium tigillum.—What is a more likely explanation than the one Livy provides? (c) Velut sub jugum.—Explain the significance of this as a punishment to the young Horatius. (d) Is Livy at all critical in his historical work? What is his view of history and how would that view be likely to react on his critical faculty?

III.—Translate at sight:—

Page 76, paragraphs 9 to 11 inclusive.

SECOND YEAR.

Latin Prose Composition.

Tuesday, May 25th.—Afternoon, 2 to 4.

While this was being done by Caesar, the Treviri were planning to attack Labienus and the one legion which was wintering in their territory. And they were now not further away than a journey of two days when they learned that two more legions had been sent by Caesar. And so they pitched their camp and decided to wait for the German contingent to come up. Between Labienus and the enemy there was a river with rough banks and hard to ford. Labienus feared to cross and did not think the enemy would do so unless lured on by a stratagem. So he declared openly before the soldiers that, since it was said that the Germans were approaching, he would not endanger his own and the army's safety, but that he would break camp on the next day early in the morning and withdraw. This was quickly reported to the enemy. Then calling together the military tribunes and centurions by night, Labienus disclosed what his plan was, and gave orders that camp should be broken with greater uproar and confusion than is the custom of a Roman army. By these means he made his departure resemble a retreat, and induced the enemy to cross the river.

FIRST YEAR.

Greek Authors.

Friday, May 21st., Morning, 10 to 12.30.

A

1.—Translate:—Odyssey XXII, verses 126-141.

Draw a sketch-plan of the house of Odysseus to illustrate this passage.

2.—Translate:—Odyssey XXII, verses 407-418.

- (a) Scan verses 411-412. (b) What is the Digamma? To whom is its discovery due? What assistance is it in Homeric scansion? Explain by scanning verse 288. (c) What point of Greek morals is emphasized in this passage?

B

Write on any **two** of the following topics:—

- (1) Procedure in Ostracism at Athens and advantages of the plan.
- (2) The objects of the Delian Confederacy and the way in which it passed into an Athenian Empire.
- (3) A narrative of the Sicilian Expedition, and an estimate of its outcome on the final issue of the war.
- (4) The career and character of Alcibiades.
- (5) An estimate of the effect of the Peloponnesian War upon Greek politics, morals, and material prosperity.

FIRST YEAR.

Greek Prose Composition.

Friday, May 21st., Afternoon, 2 to 4.

- 1.—Give the principal parts (using the nine-column scheme) of the Greek verbs corresponding to:—

I command, I see, I take, I deem worthy, I lead, I have,
I send, I become, I draw up in line, I announce, I throw.
I show, I err, I perceive, I cause to stand.

- 2.—Identify the forms submitted on the board.

- 3.—Translate into Greek:—

- (1) Let us not forget the treaty which we swore five years ago. (Ago = already)
- (2) The citizens were so enraged at this speech as to make a huge uproar.
- (3) If a man does such things, he will run the risk of being punished.
- (4) You cannot conquer your enemies outside the city before conquering those within.
- (5) The army tarried at Ephesus till the new generals arrived whom the ecclesia had chosen.
- (6) He said he wouldn't do it before he had to.
- (7) The philosopher asserted that, if the soul were conscious that it was immortal, men would not fear death.
- (8) He was hostile to the Athenians on account of having been banished from the city in the archonship of Callias.

SECOND YEAR.

Greek Authors.

Friday, May 21st., Morning, 10 to 12.

- 1.—“The **Medea** for instance gains greatly from its Prologue. It is able to begin straight at the centre of interest.” Justify this statement.
- 2.—Translate:—Verses 348-356.
 - (a) Note examples of ‘epic’ phraseology in this speech.
 - (b) Construct from the play an estimate of the character of Kreon. Compare it with that of Jason.
- 3.—Translate:—Verses 824-845.
 - (a) Explain the references in the underlined words.
 - (b) Trace broadly the stages by which the Chorus passed from its position as the chief element of Tragedy to the non-essential place it occupies with Euripides.
- 4.—Translate:—Verses 1040-1055.
 - (a) Comment upon the meaning of the underlined words.
 - (b) Verses 1053-1055. “These words are an awful parody upon a hallowed formula.” Explain.
 - (c) It has been said that in a Greek tragedy the victim falls at the point where two lines of opposing duty intersect each other. Work this out with reference to the death of Medea’s children.

SECOND YEAR.

HISTORY.

Thursday, April 29th., 1909.—Afternoon, 2 to 5.

- 1.—Discuss the conditions which gave rise to the Feudal system in Europe.
- 2.—What effect did the rise of the commercial cities have upon the Middle Ages?
- 3.—Discuss the events which led to the Hussite War.
- 4.—State some of the immediate results of the Revival of Learning.
- 5.—Tell what you know of the Great Schism. Discuss its effects upon the position of the Church.
- 6.—Discuss the great Peasant's War, stating its causes and results.
- 7.—What were the causes which led to the Thirty Years' War. Discuss the attitude of France with regard to it.
- 8.—Sketch briefly the growth of the British Colonial Empire,
a.—in India, b.—in North America.

FIRST YEAR.

Plane Trigonometry.

THURSDAY, MAY 20th.

MORNING, 9.30—12.30.

NOTE.—Tables to be used only in Questions (7), (9) and (10).

1. Deduce from a diagram the relationship between the trigonometrical ratios of $(90 + A)$, $(270 - A)$, $(180 - A)$ and those of A

2. Prove by means of a diagram that $\cos(A + B) = \cos A \cos B - \sin A \sin B$.

3. Express as products.

(a) $\sin P - \sin Q$.

(b) $\cos 40^\circ - \cos 60^\circ$.

(c) $\cos 10^\circ + \cos 150^\circ$.

(d) $\sin 4A + \sin 6A$.

4. Express as sums or differences:—

(a) $\sin P \cos Q$.

(b) $\cos 40^\circ \cos 60^\circ$.

(c) $\cos 10^\circ \sin 50^\circ$.

(d) $2 \sin 3A \sin 5A$.

5. Prove the following identities:

(a) $\cos^4 A - \sin^4 A = 1 - 2\sin^2 A$.

(b) $\frac{\operatorname{cosec}^2 B}{\operatorname{cosec}^2 B - 2} = \sec 2B$.

(c) $4 \sin A \sin (60 + A) \sin (60 - A) = \sin 3A$

(d) $1 + \tan 2A \tan A = \sec 2A$.

6. Solve fully the following equations:

(a) $\sin x + \cos x \cot x = 2$.

(b) $\sec^2 x - \tan x = 3$.

(c) $\tan^{-1} x + \tan^{-1} 2x = \tan^{-1} \frac{3\sqrt{3}}{5}$

7. Define a radian. In a circle of 40 inches radius what length of arc will subtend an angle of 0.86 radians? What is the length of the chord upon which this arc stands? What is the area of the sector containing this angle?

8. Deduce $\tan 3A$ and $\cos 2A$ in terms of the trigonometrical ratios of A .

8. Deduce $\tan 3A$ and $\cos 2A$ in terms of the trigonometrical ratios of A .
opposite sides of a hill is 1124 and 956 yards, and the angle subtended at the station by their distance is $62^{\circ} 33'$. How far apart are the objects?

10. *The sides of a triangle are 1242, 1496 and 842 feet in length. What are the angles?

FIRST YEAR.

Trigonometry.—Applied Science.

Thursday, April 29th, 1909. 9.30—1.00.

1. Prove by a diagram that $\cos(A+B) = \cos A \cos B - \sin A \sin B$; A and B being first quadrant angles of such magnitudes that their sum (A+B) is (a) a first quadrant angle (b) a second quadrant angle.

2. Deduce the following formulæ connecting the sides and angles of any triangle:

$$(a) \frac{\sin A}{a} = \frac{\sin B}{b} = \frac{\sin C}{c}.$$

$$(b) a^2 = b^2 + c^2 - 2cb \cos A$$

$$(c) \tan \frac{A-B}{2} = \frac{a-b}{a+b} \cot \frac{C}{2}$$

$$(d) \tan \frac{B}{2} = \frac{\sqrt{(s-a)(s-c)}}{s(s-b)}$$

3. Prove the following identities:

$$(a) \sin A = \frac{\tan A}{\sqrt{1+\tan^2 A}}$$

$$(b) \frac{\sin 2A + \sin 6A}{\cos 2A + \cos 6A} = \tan 4A$$

$$(c) \tan^{-1} \frac{1}{1+a} + \tan^{-1} \frac{1}{1-a} + \tan^{-1} \frac{2}{a^2} = n\pi$$

4. What value of x will satisfy the following equations:

$$(a) \cot x = \tan \frac{x}{2}$$

$$(b) 4\sqrt{3} \cot x = 7 \operatorname{cosec} x - 4 \sin x.$$

$$(c) \cos^{-1} x + \cos^{-1} (1-x) = \cos^{-1} (-x).$$

5. Simplify the following expressions:

(a) $x \cos \sin^{-1} x$.

(b) $\tan (2 \tan^{-1} x)$.

(c) $\tan^{-1}(x \sin \operatorname{cosec}^{-1} x)$

6. Two inaccessible points A and B are sighted upon from the ends of a line CD, 329.5 feet long, and the following angles obtained: $\angle DCA = 75^\circ 19'$; $\angle DCB = 62^\circ 23'$; $\angle CDA = 54^\circ 45'$; $\angle CDB = 92^\circ 54'$. Calculate the length of the line AB and its inclination to the line CD.

7. Solve the triangle ABC in which $A = 74^\circ 52'$; $B = 51^\circ 19'$ and $a = 400.8$.

8. Two points A and B are invisible from one another. At a third point C the angle subtended by AB is $54^\circ 24'$. The sides AC and BC are measured and found to be 494.6 and 326.2 feet respectively. Find the distance from A to B and the angle which the line AB makes with the line AC.

9. Solve the triangle in which $a = 952.6$; $b = 846.4$; $c = 594.8$.

10. Two slopes in a coal mine meet at such angle that the line joining A, a point at their junction, to B, a point 634.2 feet up one slope, makes a horizontal angle of $52^\circ 28'$ with the line joining A to C, a point 468.4 feet down the other slope. If the line AB is inclined upward at an angle of $15^\circ 29'$ from the horizontal and the line AC is inclined downward at angle of $28^\circ 14'$ from the horizontal, find the inclined distance from C to B, the inclination of this line to the horizontal and the horizontal angle which the line CB would make with the line CA.

FIRST YEAR.

SPERICAL TRIGONOMETRY.

Friday, April 30th., 1909.—Afternoon, 2 to 5.

1.—Prove the following formulae:—

(a) In any rightangled triangle ($C=90^\circ$) $\text{Sin } A = \frac{\text{Sin } a}{\text{Sin } c}$

(b) In any triangle $\cos b = \cos a \cos c + \sin a \sin c \cos B$.

2.—Assuming the necessary relationships between the sides and angles of a spherical triangle, prove that:—

(a) In any right-angled spherical triangle a side and the opposite angle are of the same species.

(b) In any spherical triangle the half sume of any two angles is of the same species as the half sum of their opposite sides.

(c) The sum of the angles of an yspherical triangle must lie between two and six right angles.

3.—Assuming the formula giving the tangent of the half angle in terms of the sides deduce, by use of the polar triangle, the tangent of the half side in terms of the angles.

4.—Solve the spherical triangle in which $C=90^\circ$, $a=50^\circ-40'$, $c=65^\circ-30'$.

5.—Solve the spherical triangle in which $a=84^\circ-28'$, $b=108^\circ-33'$, $A=75^\circ-52'$.

6.—Solve the spherical triangle in which $a=84^\circ-19'$, $b=115^\circ-46'$, $c=102^\circ-27'$.

SECOND YEAR.

Analytical Geometry.

Thursday, May 4.—Afternoon, 2 to 5.

1. Find the condition that the general equation of the second degree may represent two straight lines.
2. Find the equation of a line through the point (4.5) forming with the lines $2x - y + 3 = 0$ and $3y + 6x = 7$ a right-angled triangle.
3. Given the circles $x^2 + y^2 - 2x - 4y + 4 = 0$
 $x^2 + y^2 - 6x + 5y - 2 = 0$
 - (a) Find their radical axis.
 - (b) Find the length of the tangent drawn from (3.2.) to one of the circles.
 - (c) Show that the polar of (3.2.) with respect to the first circle is $2x = 3$.
4. Prove that the sum of the squares of a pair of conjugate diameters of an ellipse is constant.
5. Refer the equations of the ellipse to a pair of conjugate diameters.
6. The extremity of a diameter of the ellipse $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$ is $(x.y.)$, the extremity of the conjugate diameter is (x^2y^2) . Find x^2 and y^2 in terms of x . and y .
7. (a) Find the equation of the tangent to the hyperbola $\frac{x^2}{a^2} - \frac{y^2}{b^2} = 1$ at the point $x.y$.
 (b) Find the condition that $y = mx + n$ touches the same hyperbola.

8. Transform the hyperbola to its asymptotes as axis.

9. Shew that the line $x \cos \alpha + y \sin \alpha = p$ touches $\frac{x^2}{a^2} + \frac{y^2}{b^2} = 1$ if $p^2 = a^2 \cos^2 \alpha + b^2 \sin^2 \alpha$.

10 Shew that the equation

$$Ax^2 + 2Hxy + By^2 + 2Gx + 2Fy + C = 0$$

represents a conic.

FIRST YEAR

Descriptive Geometry.—Applied Science.

Thursday, April 29th., 1909.—Afternoon, 2 to 5.

Note.—Methods of construction must be indicated clearly by light pencil lines, results to be shown in heavy pencil lines. Diagram accompanies (4) (5) and (8).

- (1).—Show the projections of a right square pyramid (axis 2", edge of base $1\frac{1}{2}$ "') when the pyramid is, (a) standing on the H.P. with an edge of the base at 45° to the V.P.
(b) lying on a slant face in the H.P. with the edge of the base in H.P. at 30° to the V.P.
- (2).—Show the projections of a right triangular prism (height $2\frac{1}{2}$ "', base an equilateral triangle of 2" side) when one of the edges of the base is at 45° to the V.P.; the axis of the prism is at 45° to the H.P. and (a) parallel to V.P. (b) inclined at 30° to the V.P.
- (3).—A right circular cone has a base of $2\frac{1}{2}$ "' in diameter and a generating line 3" long. Show its projections when the axis is inclined to the V.P. at 45° and the base is (a) vertical (b) inclined to the H.P. at 60° .
- (4).—Show the traces of the planes containing the given line A B and tangential to the given cone.
- (5).—Show the traces of the planes containing the given line C D and inclined to the H. P. at 60° .
- (6).—Upon a right circular cylinder (diameter of base 2", height 2") standing on the H.P. with its axis 2" from the V.P. is placed centrally a square slab (depth $\frac{1}{2}$ "', edge $2\frac{1}{2}$ "') having one edge at 30° to the V.P. Show the total shadow cast by the slab if the plans and elevations of the rays of light make angles of 45° and 60° , respectively, with the XY-line.

- (7).—Three lines oa , ob and oc , meeting at o so that the angle aob is 110° and the angle aoc is 140° , represent the plans of three axes OA , OB and OC which meet in space at right angles to one another. Show the plan of a right square prism of which the axis is $4''$ and parallel to OA and the edges of the base are $1\frac{1}{2}''$ and parallel to either OB or OC . A circular hole of $1''$ diameter is bored through the center of one of the faces of the prism. Show also the plan of this hole.
- (8).—Show the plan, elevations and developments of the interpenetration of the given cone and cylinder.

FIRST YEAR.

Physics.

Tuesday, May 4th.

Afternoon, 2 to 5

- 1.—Define:—conduction of heat, convection of heat, mechanical equivalent of heat.
- 2.—State the laws of reflection and refraction of light. Show how the laws of reflection may be experimentally proved.
- 3.—Explain the difference between a real and a virtual image, explaining each by means of an illustration.
- 4.—Distinguish between intensity and pitch of a note. Describe a method for determining the pitch.
- 5.—Describe a method for determining the velocity of sound (a) in air; (b) in a solid body.
- 6.—“Two notes of different numbers of vibrations produce beats.” Explain this statement.
- 7.—Why do we say there are two kinds of electrification? Describe an experiment with an electroscope, illustrating your answer.
- 8.—Define:—declination, inclination, horizontal component, isogonal lines, agonic lines.
- 9.—Explain the principle of the electric motor.

FIRST YEAR.

Physics. — Applied Science.

Tuesday, April 27th, 1909.—Morning 9.30 to 12.30.

1. Define : specific heat and latent heat. Describe a method for determining the latent heat of fusion.
2. Define : conduction of heat, convection of heat, mechanical equivalent of heat, specific thermal conductivity.
3. If v be the velocity of sound in air at temperature t , and V_0 that at temperature 0°C , shew that $v = V_0\sqrt{1 + \alpha t}$ where α is the coefficient of expansion of air.
4. State the law of vibration of stretched strings. If a string 50 cm. in length, weighing .125 grams, be stretched under a weight of 5 kilograms, determine its vibration period.
5. Shew how the velocity of sound in air may be determined by means of a resonance tube. Deduce the formule for making the calculation .
6. Apply the law of reflection of light, (a) to determine the angle of a prism ; (b) to determine the position of an imige in a concave mirror.
7. If I be the angle of a prism, D the deviation of a ray passing through it, and u the refractive index of the prism, show that :

$$u = \frac{\sin \frac{D+I}{2}}{\sin \frac{I}{2}}$$

8. Describe the compound microscope.
(a) Shew how to find its magnifying power.
9. Describe Fresnel's method of demonstrating interference of light. Shew how the principle can be applied to determine a wave length.

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